S & T Users

SOAP AND CHEMICAL SPECIALTIES

JUNE 1960

So far this year Onyx Chemical Corp., Jersey City, N. J., has passed three milestones: adopted new name, put up stock for public sale, and marked 50th anniversary. Responsible for sparking growth and changes at Onyx is Fritz O. Robitschek, president.

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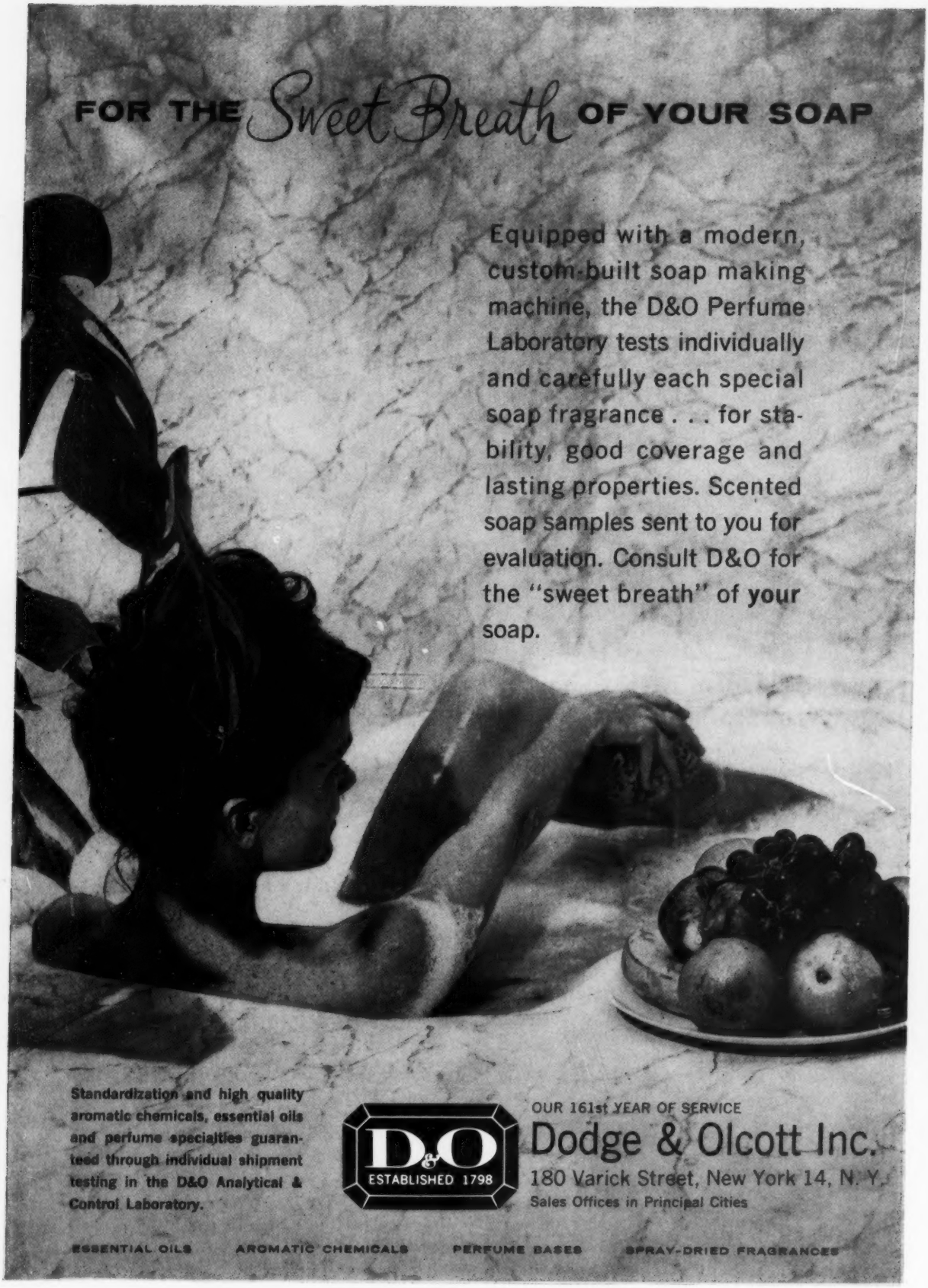
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Higher guaranteed minimum phenol coefficient.

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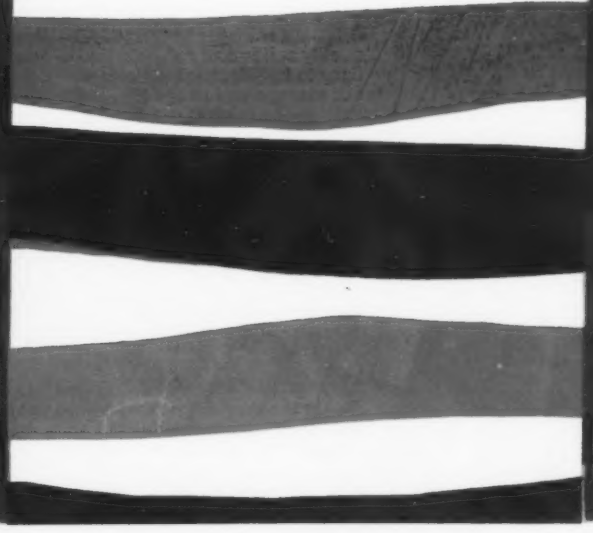

Onyx BTC-2125 is a most potent germicide that offers the best sanitizing and disinfecting properties to your product. There is no substitute for this blend of two distinct quaternary ammonium compounds. BTC-2125 is designed to obtain maximum biocidal properties and high hard water tolerance levels. Formulate your detergent sanitizers based on BTC-2125 . . . the germicide that gives you more for your money. Write for technical bulletin and samples.

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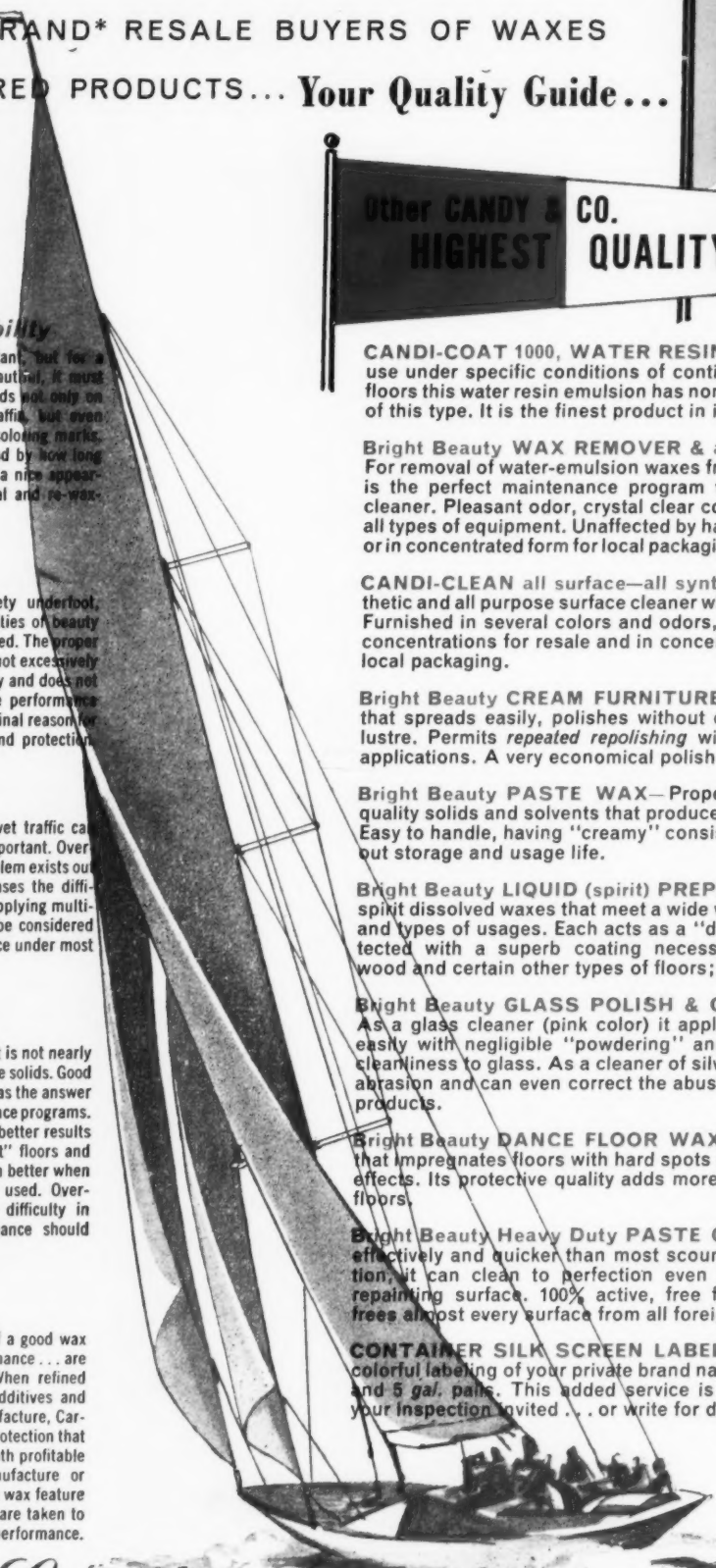
BRIGHT BEAUTY®
CANDY'S SUPREME Special WR
SUPER CAND-DOX®
CAND-DOX® # CS
CANDI-WAX #6000

Other CANDY & CO. HIGHEST QUALITY PRODUCTS



Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax—beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance should be avoided.

Carnauba Wax

The most important features of a good wax . . . all-around quality of performance . . . are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

CANDI-COAT 1000, WATER RESIN EMULSION— As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER— For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging . . . nothing but water to buy or mix in.

CANDI-CLEAN all surface—all synthetic CLEANER— This is an all synthetic and all purpose surface cleaner with free rinse and free wipe off qualities. Furnished in several colors and odors, and properly priced. Available in two concentrations for resale and in concentrated form for dilution with water for local packaging.

Bright Beauty CREAM FURNITURE POLISH— A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits *repeated repolishing* with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX— Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES— A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry cleaner" to keep surfaces wax protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH— As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre *without* abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX— Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove . . . free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER— *Cleans* and *scours* more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

CONTAINER SILK SCREEN LABELING— Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 *gal.* drums and 5 *gal.* pails. This added service is accomplished right in our plant . . . your inspection invited . . . or write for details.

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Volume XXXVI, No. 6, June, 1960

Cover photo: Fritz O. Robitschek, president of Onyx Chemical Corp., Jersey City, N.J., has sparked a number of changes in this 50-year-old supplier of bulk surfactants. So far, this year, Onyx has changed its name and its stock has been put up for public sales. A former merchandise manager for Colgate-Palmolive Co., Mr. Robitschek joined Onyx in 1956. Story on page 113.

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Published monthly by
MAC NAIR-DORLAND COMPANY, Inc.

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President

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Vice-President and Treasurer

Publication Office
254 W. 31st St., New York 1, N. Y.
Telephone Bryant 9-4456

Chicago Office
612 N. Michigan Ave.

OFFICIAL PUBLICATION
CHEMICAL SPECIALTIES MANUFACTURERS ASSN

Subscription rates: U. S., $4.00 per year; Canadian, $5.00; Foreign, $11.00 (two years only). Copy closing dates—15th of month preceding month of issue for reading matter; 10th of month preceding month of issue for display advertising.

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If you can't visit the plant, send for the new Armour booklet, "Progressive Aliphatic Chemistry—a Report on Chemical Development by Armour."

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In your laboratory you can see the clarity of our tetrapotassium pyrophosphate in solution . . . or measure its high degree of light transmission with the spectrophotometer. Better still, see it as the shopper does . . . in the clean, efficient-as-it-looks appearance of your product.

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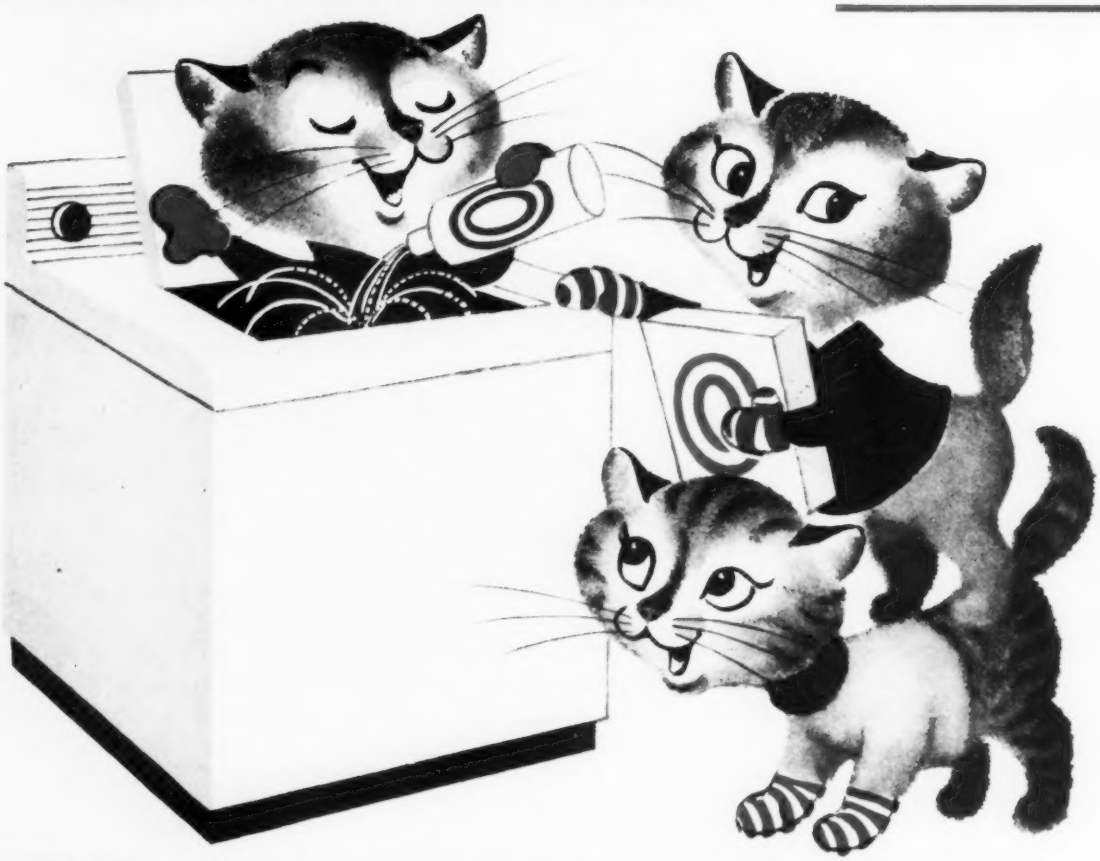

With detergents made from
NEOLENE 400

The proven chemical intermediate . . . Neolene® 400 . . . is used by many of the world's leading processors of detergents and surfactants. It is an alkyl benzene of the highest quality and is an exceptional base for both liquid and dry detergents. Why not put Neolene 400 to work for you? Its many characteristics include:

- Stability during sulfonation
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- Excellent color and odor
- Makes detergents with exceptional wetting, cleansing and foam properties

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"For chemicals with a headstart on the future, count on Conoco."

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May we suggest that you call or write today for samples and more information about Neolene 400. **CONTINENTAL OIL COMPANY,** PETROCHEMICAL DEPARTMENT
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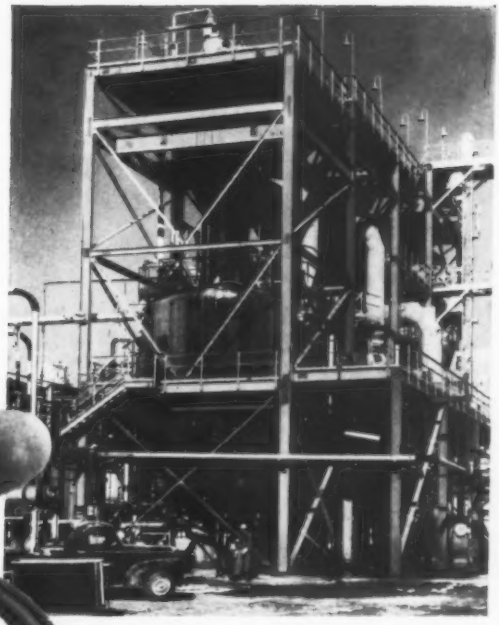
BORAX

GRANULAR...in special uniform meshes in a variety of grain sizes



Vacuum crystallizers are an important segment of the new, ultra-modern, refinery recently completed and on stream at Boron, California.

Granular borax improves powdered hand soaps

Are you making powdered hand soaps? Or cleansers? Evaluate the use of granular borax in your product! Others have found that borax boosts the cleansing power . . . makes soap work better in any water. So, today we're producing more granular borax than ever before; witness our new vacuum crystallizing plant shown above. It is part of the newly expanded refinery built to assure our customers of a dependable basic source of quality borates . . . in every form for every possible use. Get in touch with us now for helpful suggestions. You'll get sound advice. We've been *specialists* in borates and boron products for more than half a century!

...and here are **borates** ...of interest to Chemical Specialties Manufacturers...

GRANULAR BORAX... *in special screen sizes*
BORAX 5 MOL... *Pentahydrate form of Sodium Tetraborate*
SODIUM METABORATE
POTASSIUM TETRABORATE... *Granular*
POTASSIUM PENTABORATE... *Granular and Powdered*
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4 NEW STEROX® NONIONICS — ALKYL PHENOL CONDENSATES

Now, in many types of products, you can "zero in" even closer on a number of properties to boost performance and sales appeal. Monsanto has added four new alkyl phenol-type nonionics to its STEROX line of surface-active agents.

New STEROX DF, DJ, NJ and NL were developed to give consistent performance and genuine economy. They are stable in acidic and alkaline media, even at elevated temperatures, and are effective in both hard and soft water. They provide *specific advantages* where low odor, light color and good detergency are wanted; and also where emulsification, wetting, foaming characteristics or liquid-solid contact is important.

To discover the specific advantages to you, check the table shown here. Then use the convenient coupon to get more information, samples and technical help. Or simply call your nearby Monsanto representative or service-minded distributor.

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Inorganic Chemicals Division
Dept. 3029-W, St. Louis 66, Missouri

Please send me ( ) Technical Data Sheets on new STEROX DF, DJ, NJ and NL.
( ) Comparison Card describing *16* STEROX and SANTOMERSE surfactants.

Name .....

Company .....

Address .....

City ..... *Zone* ..... *State* .....

Monsanto STEROX

DF

Ethylene oxide adduct of:	dodecyl phenol
Color, APHA (typical)	180
pH, 1% solution (typical)	7.0
Cloud Point, °C. (1% solution)	below 0
Foam, Ross Miles, cm. (0.1% @ 50°C.)	
25 ppm water, inst.	2.0
after 5 min.	1.9
150 ppm water, inst.	1.8
after 5 min.	1.7
Surface Tension (0.25% @ 25°C.)	32.7
Interfacial Tension (0.25% @ 25°C.)	2.3
Spreading Coefficient	—0.5
Draves Wetting Time, sec. (0.25% @ 25°C.)	75

Solubility... Miscible with water in all proportions. Soluble in many nonpolar solvents. Functions well wherever a surfactant would be desirable in oils or aliphatic solvents.

Other Promising Characteristics... Valuable intermediate for sulfation. Conversion produces high-foaming active ingredients especially suited for liquid detergents. Unreacted, it is a low-foaming surface-active agent for use *per se* and an excellent emulsifier.

Typical uses... In liquid detergents, emulsifiable toxicant concentrates, metal cleaning and treating compounds; as a paper rewetting agent and an emulsifier in a variety of applications.

Monsanto STEROX

DJ

Ethylene oxide adduct of:	dodecyl phenol
Color, APHA (typical)	100
pH, 1% solution (typical)	7.0
Cloud Point, °C. (1% solution)	40
Foam, Ross Miles, cm. (0.1% @ 50°C.)	
25 ppm water, inst.	2.9
after 5 min.	2.5
150 ppm water, inst.	2.8
after 5 min.	2.5
Surface Tension (0.25% @ 25°C.)	34
Interfacial Tension (0.25% @ 25°C.)	1.9
Spreading Coefficient	−1.4
Draves Wetting Time, sec. (0.25% @ 25°C.)	12
Detergency, unbuilt @ 60°C., 0.2% in 150 ppm water, as % lauryl sulfate	102

Solubility... Soluble in water and most polar solvents, but generally insoluble in nonpolar solvents.

Other Promising Characteristics... Low foam and high chemical stability are combined with effective functional properties and ease of use. Lack of odor typically associated with this type of surface-active material makes perfuming easier—helps build market appeal for your products.

Typical uses... In liquid and powdered detergents, chemical processing, textile dyes and scouring agents, and numerous compounds for metal cleaning and treating, paper de-inking, felt washing and other wet processing operations.

Monsanto STEROX

NJ

Ethylene oxide adduct of:	nonyl phenol
Color, APHA (typical)	50
pH, 1% solution (typical)	7.0
Cloud Point, °C. (1% solution)	54
Foam, Ross Miles, cm. (0.1% @ 50°C.)	
25 ppm water, inst.	12.9
after 5 min.	8.3
150 ppm water, inst.	12.7
after 5 min.	8.0
Surface Tension (0.25% @ 25°C.)	34.8
Interfacial Tension (0.25% @ 25°C.)	2.9
Spreading Coefficient	−3.2
Draves Wetting Time, sec. (0.25% @ 25°C.)	5
Detergency, unbuilt @ 60°C., 0.2% in 150 ppm water, as % lauryl sulfate	102

Solubility... Soluble in water and most polar solvents, but generally insoluble in nonpolar solvents.

Other Promising Characteristics... Exceptionally light colored, this "wheel horse" nonionic is effective *per se* as an emulsifier and as a light-duty detergent for hard surfaces. In combination with SANTOMERSE alkyl aryl-sulfonates, it exhibits foam-stabilizing effects, and produces a denser foam than that obtained with alkyl aryl sulfonates alone.

Typical uses... In liquid and powdered detergents, insecticides, and in numerous compounds for textile, paper and leather processing, chemical processing, petroleum acidizing and secondary recovery.

Monsanto STEROX

NL

Ethylene oxide adduct of:	nonyl phenol
Color, APHA (typical)	100
pH, 1% solution (typical)	7.0
Cloud Point, °C. (1% solution)	76
Foam, Ross Miles, cm. (0.1% @ 50°C.)	
25 ppm water, inst.	15.5
after 5 min.	8.8
150 ppm water, inst.	15.6
after 5 min.	8.6
Surface Tension (0.25% @ 25°C.)	36.2
Interfacial Tension (0.25% @ 25°C.)	4.3
Spreading Coefficient	−6.0
Draves Wetting Time, sec. (0.25% @ 25°C.)	7
Detergency, unbuilt @ 60°C., 0.2% in 150 ppm water, as % lauryl sulfate	103

Solubility... More soluble than Sterox NJ. Especially useful in solutions containing inorganic salts or SANTOMERSE® alkyl aryl sulfonates.

Other Promising Characteristics... Primarily designed for use in liquid detergents. Exceptionally valuable for this application in combination with Monsanto TKPP. Effective *per se* as an emulsifier and light-duty detergent for hard surfaces. In combination with SANTOMERSE alkyl aryl sulfonates, it exhibits foam-stabilizing effects and produces a denser foam than that obtained with alkyl aryl sulfonates alone.

Typical uses... In liquid detergents, industrial cleaners, textile scouring and soaping-off compounds, many specialty products; as a post-polymerization latex paint stabilizer.

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Whether you need tripoly, trisodium, tetrasodium or chlorinated T.S.P., for example, you're sure to get what you order *promptly*—from any of five different producing points or from warehouses located strategically throughout the entire country. *We clear the way* for faster delivery of a complete selection of sodium phosphates.

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Victor Chemical Works, *Division of Stauffer Chemical Company*, 155 N. Wacker Drive, Chicago 6

The first meaningful color stability specifications for fatty acids

	Lovibond Color—5¼" Cell-Y/R Max.		
	Original Color Spec.	Color Stability Specification	Typical Color Stability
EMERSOL OLEIC ACIDS			
233 LL (low-linoleic)	3.0/0.5	10.0/3.0	7.0/2.5
221 Low Titer White Elaine	5.0/0.5	20.0/7.0	15.0/5.0
EMERSOL STEARIC ACIDS			
132 Lily (T.P.)	1.0/0.3	4.0/1.8	2.0/1.3
120 (D.P.)	1.5/0.5	7.0/2.0	4.5/1.5
140 Palmitic	1.0/0.3	6.0/2.0	3.0/1.5
150 High Stearic	1.0/0.3	6.0/2.0	3.0/1.5

These new Emery specifications are meaningful because they are based on the new A.O.C.S. standard test method, the first *reproducible* color stability test. Essentially, method L15a-58 subjects samples to 205°C under a blanket of nitrogen . . . stearic acids for 2 hours and oleic acids for 1 hour.

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Try them in your product and you will see the difference. For a comparison of these specifications in Lovibond, Photometric Index and Gardner color systems, write Dept. S-6 for a copy of Technical Bulletin No. 222.

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Fatty Acid Sales Department

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Emery Industries (Canada) Ltd., London, Ontario — Export Department, Cincinnati

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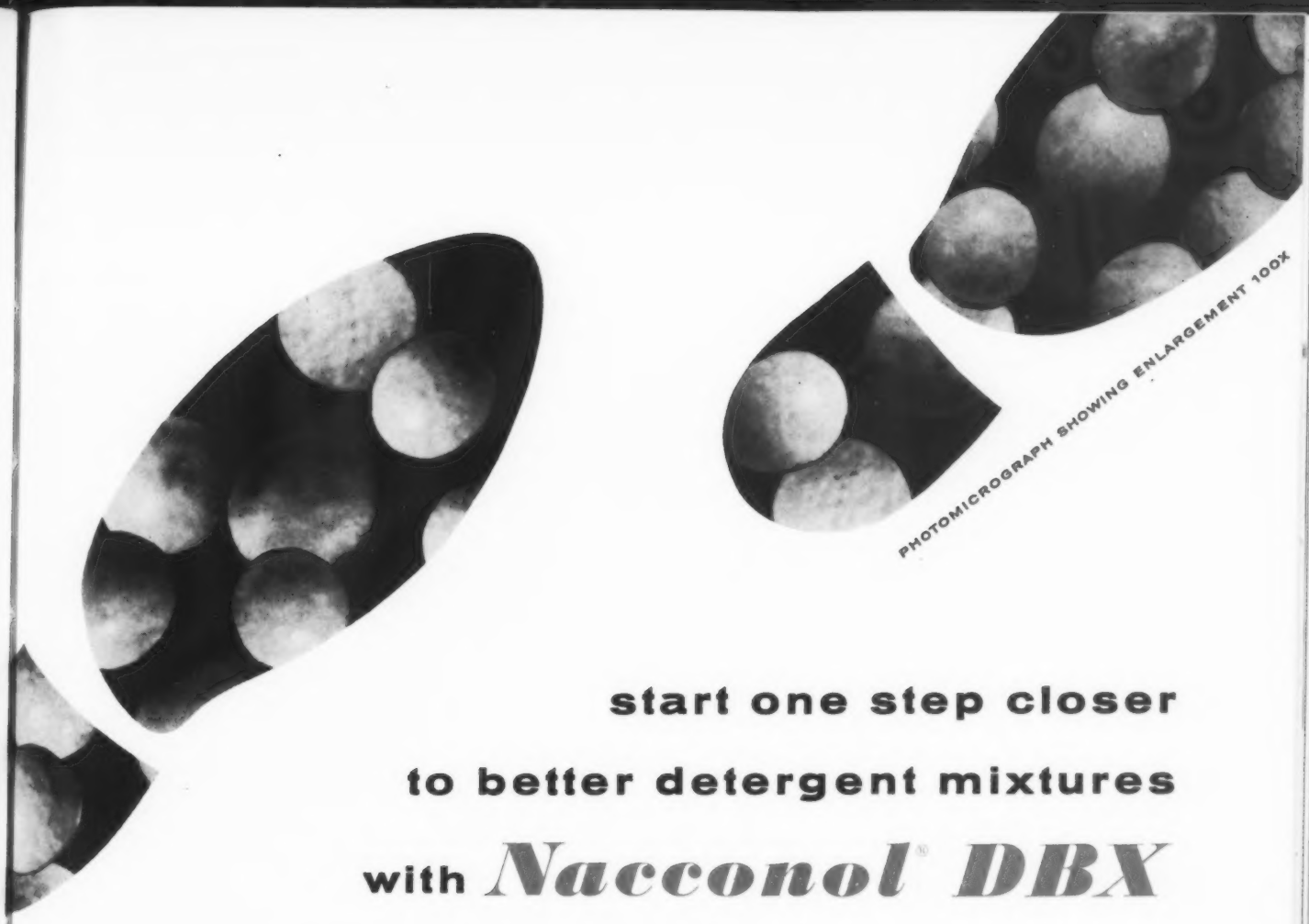

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☐ 2. Organic Solvents, completely revised second edition by Riddick and Toops. 560 pages including tables of physical properties of 254 solvents. Covers physical properties and methods of purification. Price: $10.00.

☐ 3. Surface Active Agents and Detergents, by Schwartz-Perry. Two volumes. Volume I: 590 pages, 51 illus., 4 tables. Covers processes for synthesizing and manufacturing surface active agents, physical chemistry of surface active agents and practical applications of surface active agents. Price: $13.50. Volume II: Approximately 860 pages, approximately 26 illus. and tables. Covers processing for synthesizing and manufacturing surfactants, special function surfactants and compositions, the physical and colloidal chemistry of surfactants and practical applications of surfactants. Price: $19.50.

☐ 4. Detergent Evaluation and Testing, by Jay C. Harris. 220 pages. 26 illus., 15 tables. A critical selection of methods and procedures for the testing of detergents. Price: $4.50.

☐ 5. Organic Insecticides, by R. L. Metcalf. 402 pages, 7 illus., 70 tables. Covers most organic insecticides, their chemistry and their mode of action. Price: $10.00.

☐ 6. Advances in Pest Control Research, edited by R. L. Metcalf. Volume I: 522 pages, 11 illus., 13 tables. Covers the most recent advances in all phases of the applied science of pest control. Price $12.50. (Volume II also $12.50)

☐ 7. Systematic Analysis of Surface-Active Agents, by Milton J. Rosen and Henry A. Goldsmith, Vol. 12. A series of monographs on analytical chemistry and its applications. (1960) 439 pages, 47 illustrations, 28 tables. Price: $13.50.

☐ 8. Handbook of Cosmetic Materials, by Greenberg-Lester. 467 pages. Covers the properties, uses and toxic and dermatological actions of over 1,000 materials selected in response to a questionnaire sent to cosmetic manufacturers. Includes a chapter on the skin by Howard W. Haggard, Director, Applied Physiology Laboratory, Yale University. Price: $13.50.

☐ 9. Soap Manufacture, by Davidson et al, in two volumes. Volume I: 537 pages, 66 illus., 118 tables. Covers the history of the soap industry, theoretical principles of soap manufacture, raw materials of soap manufacture and the fatty raw materials. Price: $13.50. (Volume II in preparation)

☐ 10. Cosmetics: Science and Technology, edited by Edward Sagarin. 1453 pages, 138 illus., 107 tables. Covers origin, development of cosmetic science and discusses individual products such as hand creams, suntan preparations, skin lighteners, shaving soaps and creams, nail polishes and removers, deodorants, aerosol cosmetics and many other cosmetic and toiletry products. Price: $27.50.

☐ 11. Industrial Oil and Fat Products, by Alton E. Bailey. 991 pages, 164 illus. 133 tables. Covers the nature of fats and oils, their composition and structure; raw materials; industrial utilization. Price: $18.00.

☐ 12. Fatty Acids, by Klare S. Markley. 678 pages, 81 illus., 163 tables. The chemistry and physical properties of fats and waxes. Price: $14.50.

☐ 13. International Encyclopedia of Cosmetic Material Trade Names, by Maison G. de Navarre. Nearly 400 pages of the most complete listing of all the materials of the world used in cosmetic manufacture. Includes quick, concise descriptions of approximately 4,000 materials and the names and addresses of the suppliers, as well as a cross-index of the materials and their uses. Price: $7.50.

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VINOL

POLYVINYL ALCOHOL TAILORED FOR SPECIFIC INDUSTRIAL USES

A section of Airco's Chemical Development Laboratory.

Airco VINOL polyvinyl alcohol is offered in 9 versatile grades, each with properties tailored for specific applications in such varied fields as adhesives, textiles, paper, plastics, ceramics, cosmetics, paints and photoengraving.

Textile applications include warp sizing for a variety of fibers, sizing for nylon hosiery yarns, ingredient in various types of finishes, and binder for non-woven fabrics and ribbons. In the paper field, polyvinyl alcohol is used as a coating and surface size for paper and paperboard.

Among plastics applications are molded products, water-soluble films; films with special properties such as resistance to grease, solvents and gases; film for mold release in plastics manufacture; foams and sponges. A number of specialty applications exist in many areas—binders for ceramics; emulsifiers and thickeners for emulsions; protective coatings for metals and plastics; quenchant for steel. And the adhesives industry consumes large quantities in compounding many products.

Wide Range of Properties

VINOL resins are white powders, differing from each other in degree of hydrolysis and polymerization. These structural differences account for the differences in properties, and provide a wide range of characteristics such as water solubility or water resistance, adhesion to porous or non-porous surfaces, toughness, flexibility. Other key properties are resistance to grease, solvents, rotting and tearing.

While VINOL grades represent a range of properties, all dissolve easily in water and form colorless solutions; all have little tendency to dust.

Super Hydrolyzed VINOL 125

One of the 9 VINOL grades—VINOL 125—is unlike any other polyvinyl alcohol produced in this country. It is super hydrolyzed: 99.85+ percent hydrolyzed. Because VINOL 125 has fewer residual bulky acetate groups, films cast from solutions of VINOL 125 generally show markedly greater water resistance and less swelling in water than films cast from "completely" hydrolyzed polyvinyl alcohols. Yet VINOL 125 dissolves readily in hot water.

VINOL 125 will be the first grade available in commercial quantities. Until VINOL 125 is available, limited amounts of a polyvinyl alcohol with the same special properties but coarser in particle size are being supplied for preliminary evaluation. The fully hydrolyzed grades—VINOL 260, 230, 205—are expected to be available late in 1960, followed by the non-gelling and partially hydrolyzed grades. When grades approach the marketing stage, technical literature will be issued and samples distributed.

Largest Source of Polyvinyl Alcohol

Airco's 20-million-pound-per-year VINOL plant at Calvert City, Kentucky, is the U. S.'s largest and most modern installation producing merchant polyvinyl alcohol. It employs an exclusive continuous process which turns out resins of consistently high quality, free from variations often unavoidable in batch processing. And quality is further assured since the VINOL plant is part of Air Reduction's integrated acetylene chemicals complex with all steps—including acetylene and vinyl acetate monomer manufacture—under its control.

Technical Service

Airco's technical service laboratories are available for assistance in using VINOL resins in formulations and processing.

An experienced adhesives applications staff is at work at the technical service laboratory of the Colton Chemical Company, Division of Air Reduction Company, Inc., in Cleveland. Manufacturers interested in adhesives are invited to address their inquiries to this laboratory.

Properties of VINOL Polyvinyl Alcohol

SUPER HYDROLYZED	FULLY HYDROLYZED			NON-GELLING		PARTIALLY HYDROLYZED		
GRADE DESIGNATION	VINOL 125	VINOL 260 *	VINOL 230 *	VINOL 205 *	VINOL 350 *	VINOL 325 *	VINOL 540 *	VINOL 523 *	VINOL 505 *
VISCOSITY, CPS 4% SOLN., 20° C	24-28	55-65	28-32	4-6	45-55	23-28	35-45	21-25	4-6
PERCENT HYDROLYSIS	99.85+	99 min.	99 min.	99 min.	97.7-98.4	97.7-98.4	87-89	87-89	88-89

*Tentative specifications for grades which are scheduled for later production. Batch process polyvinyl alcohols resembling most of these grades are currently available from Colton Chemical Company.

VINOL *is the trademark of Air Reduction Company, Incorporated, for its polyvinyl alcohol.*

VINYL MONOMERS

Consumers throughout the country can count on all the vinyl acetate monomer they need from Airco. Two modern plants at Calvert City have a total capacity of 90 million pounds a year. To guarantee prompt deliveries on the West Coast as well as east of the Rockies, Airco operates bulk storage supply depots at Richmond and Vernon, California. Purity of the monomer is uniformly 99.9+ percent and Airco vinyl acetate shows consistent characteristics in polymerization reactions.

Vinyl stearate, a long-chain monomer, is a valuable tool for building such properties as flexibility and enhanced water resistance into copolymer resins.

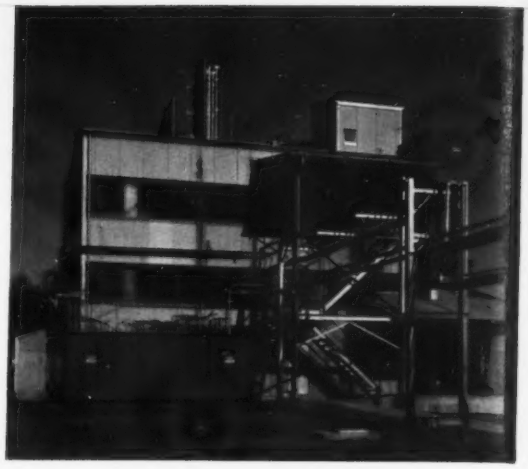
MONOMER	BOILING POINT °C	MELTING POINT °C	SPECIFIC GRAVITY 20/20	APPLICATIONS
VINYL ACETATE	72.5 (760 mm)	−100.2	0.9342	Emulsion and bead polymers used widely in adhesives, paints, textile finishes, and other coatings. Intermediate for polyvinyl alcohol and polyvinyl butyral.
VINYL STEARATE	175 (3 mm)	28-30	0.9037	Internal plasticizer in copolymerization with vinyl acetate, vinyl chloride and other monomers for resins used in paints, adhesives, paper coatings; textile finishes; chewing gum base; fabrication of pipes, sheets, tubes.

SURFYNOL Nonionic Surface Active Agents and Defoamers

These unique ditertiary acetylenic glycols combine surface active and defoaming properties not found in other nonionics. They show synergism with other surface active agents, whether nonionic, anionic or cationic: most combinations of SURFYNOLS and another surface active agent have greater activity at a given concentration than either material alone at the same concentration.

The 100% active solid SURFYNOLS, 82 and 104, show excellent high temperature stability.

TRADE NAME	CHEMICAL COMPOSITION	% ACTIVE BY WEIGHT	SURFACE TENSION 0.1% AQ. SOLN., DYNES/CM, 25°C	APPLICATIONS
SURFYNOL 104	Ditertiary acetylenic glycol	100	31.6	Increased wetting and low foam with other surface active agents; defoamer in aqueous systems; rinse-aid surfactant.
SURFYNOL 104A	Solution of 104 in 2-ethyl hexanol	50	33.0	Defoamer in emulsion systems for paints, paper coatings and textile finishes; insecticide formulations; low-foam detergents.
SURFYNOL 104E	Solution of 104 in ethylene glycol	50	36.2	
SURFYNOL TG	Mixture of ditertiary acetylenic glycol, alkyl phenyl ether of polyethylene glycol and ethylene glycol	83	27.6	Pigment dispersion in emulsion paints and other pigmented aqueous systems.
SURFYNOL 61	Dimethyl hexynol	100	32.4* *1.0% aq. soln.	Volatile wetting agent for paper coatings, floor polishes and glass cleaning formulations. Viscosity reduction.
SURFYNOL 82	Dimethyl octynediol	100	55.3	Viscosity reduction in vinyl plastisols and aniline inks. Cosmetic ingredient. Low-foam wetting agent in developer compounds. Defoamer in electroplating baths.



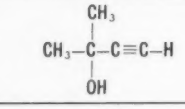
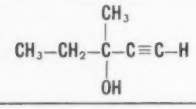
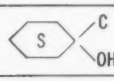
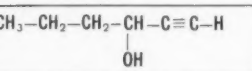
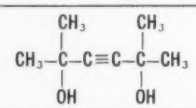
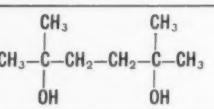
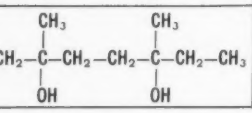
One of Airco's chemical pilot plants

KYRAX A Synthetic Wax
(Polyvinyl ester)

APPLICATIONS: Component of wax polishes and finishes for metal, leather, wood and paper; aerosol coating formulations. Mold release agent. Plasticizer.

Acetylenic Alcohols and Glycols and Derivatives

These specialty chemicals, previously not available except on a laboratory scale, offer rewarding opportunities for research and development in many fields. They are produced in commercial quantities in a continuous process plant at Calvert City, and at Bound Brook.

	STRUCTURAL FORMULA	BOILING POINT °C, 760 mm	MELTING POINT °C	SOLUBILITY in H_2O wt. % at 20°C	APPLICATIONS
METHYL BUTYNOL		103.6	2.6	miscible	Stabilizers in chlorinated solvents. Viscosity reducers and stabilizers. Electroplating brighteners. Intermediate in synthesis of hypnotics and isoprenoid chemicals such as Vitamin A, ionone and perfume alcohols. Solvents for alcohol-soluble nylon and polyamide resins.
METHYL PENTYNOL		121.4	−30.6	9.9	
ETHYNYL CYCLOHEXANOL		180	30-31	1.2	Corrosion inhibitor for mineral acids. Stabilizer in chlorinated organics. Synthesis of hypnotics, other pharmaceuticals and perfumery materials.
HEXYNOL		142	−80	3.8	Corrosion inhibitor for mineral acids; high temperature oil well acidizing inhibitor.
DIMETHYL HEXYNEDIOL		205-6	94-95	27.0	Component in wire drawing lubricant formulations. Coupling agent in resin coatings. Organic synthesis.
DIMETHYL HEXANEDIOL		214-15	87.5-89	14.3	Synthesis of peroxide catalysts and cross-linkers, cyclic musk compounds and allethrin.
DIMETHYL OCTANEDIOL		241-42	44	11.7	For investigation as highly alkaline stable low foam surfactant; high temperature solvent and component of lubricants, cutting oils.

Other Acetylene Derivatives

The following products, also available commercially for the first time, are produced in commercial quantities at Bound Brook:

Methyl Butenol (2-methyl-3-buten-2-ol)	Dimethyl Octanol (3,6-dimethyl-3-octanol)	Ethynylene Dicyclohexanol (bis[1-hydroxycyclohexyl]acetylene)	Ethyl Acetylene (1-butyne)
Methyl Hydroxy Butanone (3-methyl-3-hydroxy-2-butanone)	Methyl Pentanol (3-methyl-3-pentanol)	Methyl Acetylene (propyne)	Isopropenyl Acetylene (2-methyl-1-buten-3-yne)

For complete technical data and samples, write to:

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AFTER CLOSING---

Babbitt to Market Oakite

A marketing agreement was announced early this month between B. T. Babbitt, Inc., and Oakite Products, Inc., under which Babbitt assumes responsibility for sales, distribution, and advertising of "Oakite", the firm's only consumer product.

Oakite and its agency, Richard K. Manoff, Inc., have discontinued their association by mutual consent. Household "Oakite" will now be handled by Babbitt's own agency, Geyer, Morey, Madden & Ballard, Inc. Oakite billings are estimated at $500,000, according to recent reports.

—★—

Soapers Top Advertisers

Procter & Gamble Co. is second among 1959 top national advertisers. Lever Brothers Co. takes fifth place, according to a recent report by the Television Bureau of Advertising.

Top five national advertisers in measured media spent 55.2 per cent of their expenditures in television. Measured media include national spot and network television, newspapers, magazines, outdoor, business papers and spot radio.

Procter & Gamble, the leader in 1958, spent $105,616,190 in 1959 compared with $98,592,297 in 1958. Lever spent $56,766,422 against $52,817,674 in 1958. Television investment by P & G in 1959 was $95,340,352; by Lever Brothers Co. $46,853,895.

—★—

Solventol Names Logue

Eugene E. Logue has joined Solventol Chemical Products, Inc., Detroit, as technical director in charge of research and new product development, it was announced last month by Robert W. Huffman, president. Solventol makes a wide range of metal cleaning compounds under its own label and custom fomulates chemical cleaners for special cleaning problems.

Eugene E. Logue

Mr. Logue was previously associated with Parker Rust Proof Co.; Chrysler Corp.; Union Carbide Chemical Co.; and Peninsular Grinding Wheel.

—★—

W. F. Silbersack Dies

Walter F. Silbersack, 58, president and a director of American Home Products Corp., New York, died June 6 at his summer home in Darien, Conn. President of the company since 1945, Mr. Silbersack was general manager of A. S. Boyle Co. when that company was taken over by American Home in the early 'Thirties. In 1935 he was elected to the board of directors and in 1943 he became executive vice-president of American Home Products.

A native of Cincinnati, Mr. Silbersack attended the University of Cincinnati from 1918 to 1921 and served as assistant professor of advertising and marketing during part of this period.

He was employed by Proctor and Collier and Thompson Koch Co., Cincinnati advertising agencies from 1917 to 1923, when he joined A. S. Boyle Co. He became general manager of Boyle in 1925.

Mr. Silbersack was a trustee of Fordham University and a director of Grace National Bank of New York, Piel Brothers, Brooklyn, N. Y.; Pacific Outdoor Advertising Co., Los Angeles, P. J. Ritter & Co., Bridgeton, N. J., and 860 Fifth Avenue Corp., New York.

Surviving are his wife, Mrs. Eleanor Stoeckle Silbersack; two sons, Walter R., and J. Wayne Silbersack; his father, Adolph Silbersack; two brothers, Herbert and Arthur; and two grandchildren.

—★—

Johnson Leaves Franklin

Bayard S. Johnson, manager of the industrial division of Franklin Research Co., Philadelphia, is leaving the company July 1, after 24 years, to devote full time to his consulting business. For the past year and one-half Mr. Johnson and his wife have operated Curtis Associates from their home at 132 Golf View Road in Ardmore, Pa. Mr. and Mrs. Johnson plan to expand their consulting work in the field of digital computers and will probably rename Curtis Associates.

Prior to joining Franklin research in 1936, Mr. Johnson was with Atlantic Refining Co., Philadelphia for three years doing research on microcrystalline waxes.

He served as chairman of the Waxes and Floor Finishes Division of Chemical Specialties Manufacturers Assn. in 1950-51, and was a member of CSMA's board of governors from 1952 until 1955. Mr. Johnson has also been active in Committee D-21 on Waxes of the American Society of Testing Materials. He is secretary of D-21 at present.

—★—

Lever Toronto Buys Hart

Lever Brothers Ltd. of Toronto, Ont., has purchased Hart Products Co. of Canada, Guelph, Ont., it was announced early this month by John C. Lockwood, president of Lever Ltd. Hart makes and markets specialty chemicals which are used in industrial and consumer products.

Charles Humphrey will con-

tinue as president and E. I. Birnbaum as vice-president in charge of manufacturing and development at Hart Products, according to the announcement. No changes in personnel, location or products are envisaged.

—★—

Changes at Mennen

Mennen Co., Morristown, N. J., has established five distinct product lines and made corresponding personnel realignments, it was announced late in May. Product groups include: "Mennen's" men's line; "Baby Magic" products; "Date Line" products; family products; and proprietaries. "Citation," a new line of men's toiletries, will shortly be introduced regionally.

Jack Leonard, formerly sales promotion manager, becomes junior product manager of "Mennen's" men's line, Jerry Boehling, formerly with Warner-Lambert, joins Mennen as sales promotion manager, reporting to Irving Kiem, merchandising manager. Charles Dentinger, formerly in the marketing service department, becomes advertising manager, also reporting to Mr. Kiem.

Sylvester Cleary, formerly in charge of marketing services, has been advanced to marketing coordinator and will act as staff assistant to the director of marketing.

Robert Foth, formerly administrative sales manager has been appointed non-drug trade sales manager, and Robert Teuscher, formerly with Pharmaco, Inc., has joined Mennen as administrative sales manager. He will also serve on the firm's marketing and product committee and will report to Thomas Vandever, general sales manager.

Emil Sorenson has been appointed sales manager for both military and syndicate store sales. John Malloy, formerly with Glenbrook Laboratories, becomes sales training manager.

In addition to the above changes a number of other personnel shifts within the sales department were reported.

Joe C. Turner was recently appointed advertising and sales promotion manager for Cowles Chemical Co., Cleveland. In his new post he coordinates advertising and promotion for all Cowles departments serving the chemical, laundry, pharamaceutical, dairy, and metal finishing industries.

Aerosol News Letter

"Push Button World" is the name of a quarterly aerosol news letter published by Precision Valve International S. A., Seefeldstrasse 45, Zurich, Switzerland. Editor is W. G. Delmore, PVI vice-president. The current issue contains a feature article on "Pressure Filling and Clinching Problems" by Julius Gustin. The author describes the mechanical pitfalls encountered in the clinching and filling procedure, illustrates them by schematic drawings, and suggests ways to avoid trouble.

A short article introduces Precision Valve's German associate, Praezisionsventile G.m.b.H. in Frankfurt am Main, describes its operations.

—★—

Hooker Diversifies Further

Sodium hexametaphosphate will be added to the products manufactured by the phosphorus division of Hooker Chemical Corp., Niagara Falls, N. Y. Facilities to make the product are being built at Jeffersonville, Ind., headquarters for the division's four plants, and are scheduled for completion by Dec. 1960, according to Robert E. Noble, division general manager.

The project is proceeding simultaneously with construction of another plant at Jeffersonville for the manufacture of tetrapotassium pyrophosphate, to be completed in the fall of this year.

Hexametaphosphate is used in water treatment and in dishwashing and other detergent compounds, as well as in a number of industrial applications. Hooker has maintained warehouse stocks of the material for a number of years.

—★—

New Plastic Netting

A novel thin gauge flexible tubular netting made from polyethylene has just been introduced by E. I. du Pont de Nemours & Co., Wilmington, Del. Offered under the trade name "Vexar" the netting is suggested for a number of packaging applications, including sleeves on aerosol bottles and cans. Such jackets are decorative and serve as protection from self service shoppers who may sample contents before purchase, du Pont points out. Stretchability of the netting makes it suitable for multi-unit packaging.

The new material is made by a technique developed and patented in England to which du Pont acquired United States rights last year. By this process polymers are extruded directly in tubular net form in one single operation. Therefore each strand intersection is an integral part of the material and actually stronger than individual strands, in direct contrast to netting manufactured by techniques where the open work pattern is made after the material is extruded, according to du Pont.

"Vexar" nettings come in almost infinite variety of mesh sizes, patterns, filament diameters, colors, strengths, etc. Since it is made of polyethylene, the netting is chemically inert, flexible, and fungus resistant. If intended for container protection, it may be purchased in bags of varying sizes, heat sealed at one end. The bags are slipped over containers and shrink sealed under the bottom by a jet of hot air.

In addition to packaging applications, the material may be

used in various types of filter units, and in a number of other industrial applications.

"Vexar" polyethylene netting is currently available from du Pont in tubular and sheeting form at $1.50 per pound.

—★—

More Alkylated Phenols

Koppers Co., Pittsburgh, is expanding its plant at Oil City, Pa., to produce a broader range of alkylated phenols. Facilities are expected to be on stream July 1. Among the plant's first new products will be paratertiary butyl phenol; paratertiary aminophenol; aminophenol; and dibutyl phenol. Butyl and amino phenols are used in the production of detergents, oil soluble resins, and other industrial specialties, according to Martin Fritch, manager of chemical sales for Koppers.

The Oil City plant is currently producing metacresols, butylated hydroxy toluenes, and other antioxidants.

—★—

Calgon Cleaner Bulletin

"Pot N Pan," a soap based cleaning compound for hand washing pots, pans and kitchen utensils is described in a new bulletin, just issued by Calgon Co., Pittsburgh. The product is compounded from low titre soaps, alkaline cleaners, and "Calgon" water softening agent.

Said to dissolve rapidly, even in cold water, the cleaner has a "built in" color indicator, enabling the operator to tell when its soil carrying capacity is exhausted. It comes in 325 and 100 pound units.

—★—

Hooker Names Two

Hooker Chemical Corp., Niagara Falls, N. Y., has advanced John M. Glaze, field salesman in the New York district since 1947, to the post of supervisor—organic chemicals of the eastern chemical division. He has been with Hooker since 1942.

Succeeding Mr. Glaze in the New York district is Robert W. Roach, who has been in sales training at Hooker since August 1959.

New Derusting Compound

A new derusting compound for alkaline plating lines called "Rustnix," was introduced recently by Cowles Chemical Co., Cleveland. Packaged individually in 50 pound blocks, the product is reported to achieve an unusually synergistic effect. Each block has an inner polyethylene wrapper which is slit when the block is dropped into the bath. After the block dissolves, the wrapper is removed from the bath. "Rustnix" is said to sequester rust without attacking metal.

—★—

UBS to Complete Expansion

U B S Chemical Co., Cambridge, Mass., expects to complete construction late this month for the expansion of its polymer plant at Lemont, Ill. The plant was originally completed last January. Present construction is the first in a series of expansion moves to increase floor space five-fold. U B S produces "Ubatol" polymer emulsions at the Lemont plant for use in floor polish formulations.

Elsewhere in the company, three personnel changes were made in the sales staff. James Rishton has been named New York district manager responsible for the company's New York sales office and field sales in that area. He had been a sales representative in the New York – New Jersey area for the past 10 years. Donald J. Coffey, sales representative in the central midwest territory, has been transferred to New York to assist Mr. Rishton. He is replaced by Ernest Munkascy, who joined U B S in December.

Allan R. Livingston, recently joined the sales staff of Michael's Equipment and Industries, Ltd., Ottawa, Ontario. Mr. Livingston has been in the maintenance and sanitary supply field for more than seven years. Michael's is a private label distributor of soaps, waxes, and other chemical specialties. The firm was founded 14 years ago.

—★—

FMC Auger Filling Data

Auger filling devices for powder, paste, and granular products are described in an eight page illustrated folder just issued by Food Machinery and Chemical Corp., Packaging Machinery Division, 4900 Summerdale Avenue, Philadelphia 24, Pa.

Auger filling uses positive mechanical screw principle to convey material vertically downward from a hopper through a tube into a container. Auger is driven by an electric motor and controlled through a combination clutch and brake. Described are four different methods of controlling fill, each answering certain requirements for accuracy in relation to product characteristics.

The adjustable cam volumetric method is suggested for smaller containers where highest speeds and optimum accuracies are required. Special features are infinite number of settings of the cam mechanism and instantaneous starting and braking of the auger.

By the packing method the product is forcibly driven into the container, actually increasing its density to provide as tight and compact a fill as needed.

By the gross weighing method the product is not packed but is loosely discharged into the container. This is claimed to be the most accurate of the four methods for filling larger size containers.

"Auger-Vac" volumetric method is FMC's exclusive patented design, combines vacuum with cam volumetric filling system. This installation is said to reduce dusting and loss of product. It increases density of product, is

suggested for use with "fragile" powders. It is completely effective only with air tight cylindrical containers.

FMC's automatic filling machines come in tandem, duplex and single head arrangement, can handle packages ranging in size from 1½ x 1½ x ¼ inches to 5 x 5 x 8 inches. Accuracy is in the neighborhood of one per cent.

A wide range of semi-automatic auger filling equipment is also available. The folder includes a comprehensive chart listing speeds, weight ranges and container sizes for easy evaluation of each machine.

—★—

Center Changes Name

Center Chemical Co. recently changed its name to Oxford Chemical Corp. There has been no change in ownership and the address, 166-170 Central Ave., S.W., P.O. Box 1888, Atlanta, Ga., remains the same.

—★—

Johnson Appoints Three

Paul W. Linton was appointed controller last month of the domestic operations of S. C. Johnson & Son, Inc., Racine, Wis. Mr. Linton, who had been assistant to the president, has been with the company since 1947. He is succeeded by John Richmond, formerly assistant to the vice-president of the household products division. Also appointed was John Vaughan, as credit office manager. He had been credit manager.

—★—

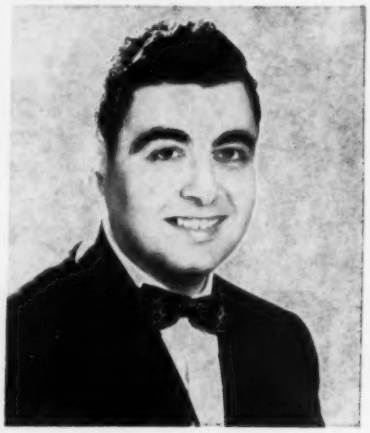
Wyandotte Sales Rise

Wyandotte Chemicals Corp., Wyandotte, Mich., producer of industrial cleaners and sanitizers and of bulk chemicals, reported for this year's first quarter a rise in sales to $22,276,000 from the $19,582,000 transacted in the corresponding period of 1959.

Net earnings in the 1960 period were $770,000, compared with $744,000 in 1959. This equals (after provision for preferred dividents) 45 cents per common share as against 43 cents a year ago.

Berkeley in Snell Post

Bernard Berkeley was advanced last month to director of the product development department of Foster D. Snell, Inc., New York, chemical and engineering consultants. Mr. Berkeley is in charge of new product development for the firm's clients in the chemical specialties, wax, and fuels and lubricants field. Each of these areas is covered by a complete operating department within the Snell organization. With the company since 1944, Mr. Berkeley has had experience in the development of soap, detergent, and chemical specialty products. He has had several articles published on these fields and patents on an aerosol shoe polish and aluminum cleaning compound have been issued to him for Snell clients.



Bernard Berkeley

—★—

Adds Sours, Starches

Four sours and four starches have been added last month by Cowles Chemical Co., Cleveland, to its line of detergents and other washroom supplies. The newly introduced group of eight products is sufficient for all laundering needs, according to W. J. Schleicher, manager of Cowles' laundry department.

The sours are described as "Neubrite" fluorescent, "Neusol" mothproofing, "FeSolv" rust removing, and "Neulin" economy. Starches or fabric finishes include thick boiling "Flexi-Finish," thin boiling "Perfect Finish," dry to the wheel "Instant Finish," and economy "Linen Finish."

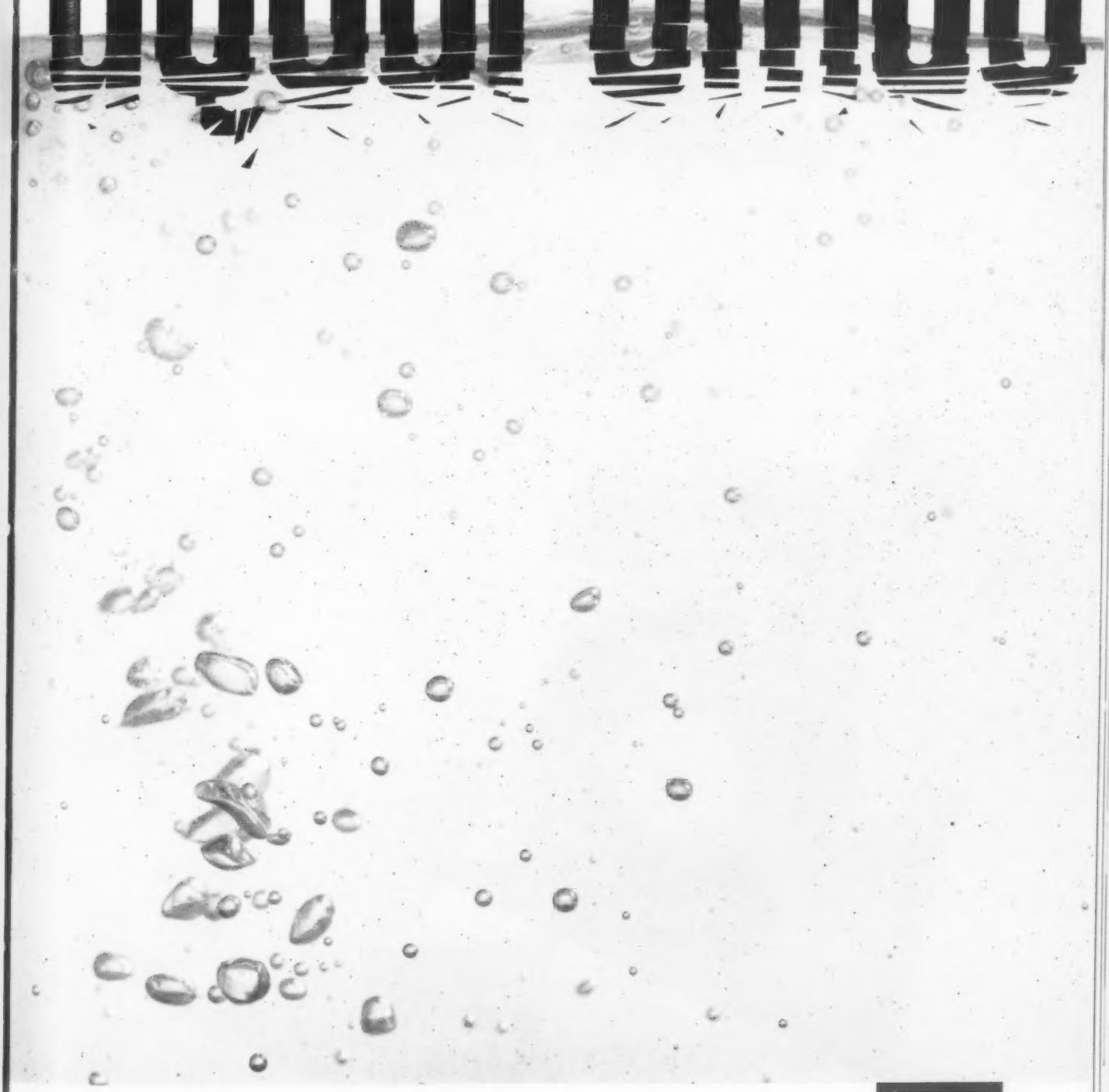
Introduction of these new products coincides with Cowles' 75th anniversary.

Multi-Meter in New Plant

Multi-Meter Corp. recently moved into a new building at 1635 Coining Dr., Toledo, O. Erected at a cost of about $125,000, the one-story building has 15,000 square feet of floor space and is of concrete block, steel, and brick construction. About 3,000 square feet of space is used for offices with the remainder devoted to manufacturing, assembly and storage of the company's line of bulk liquid dispensing equipment, and research and development activities. The company manufactures and sells the "Flo-Rite" plastic drum faucet, "M & M" dispensing pump, and a "Pour Easy" pail rack.

New plant of Multi-Meter Corp., Toledo, Ohio.

aquaromes



...the biggest name in water soluble perfumes!

Felton

Problem involving incorporating perfume into your water-based product? Ask us.

Felton Chemical Company, 599 Johnson Avenue, Brooklyn 37, N.Y.

Best detergent
New!
ALKANE*
"60"
Improved foam
Better detergency
*Trademark for Detergent Intermediate

raw material for heavy-duty formulations

Oronite's recent product and production achievement provides the detergent industry its best commercial source for a high molecular weight alkylbenzene. And ALKANE "60" can be sulfonated to the same quality as the best dodecylbenzenes. For complete information and technical data on new ALKANE "60" contact the Oronite office nearest you.

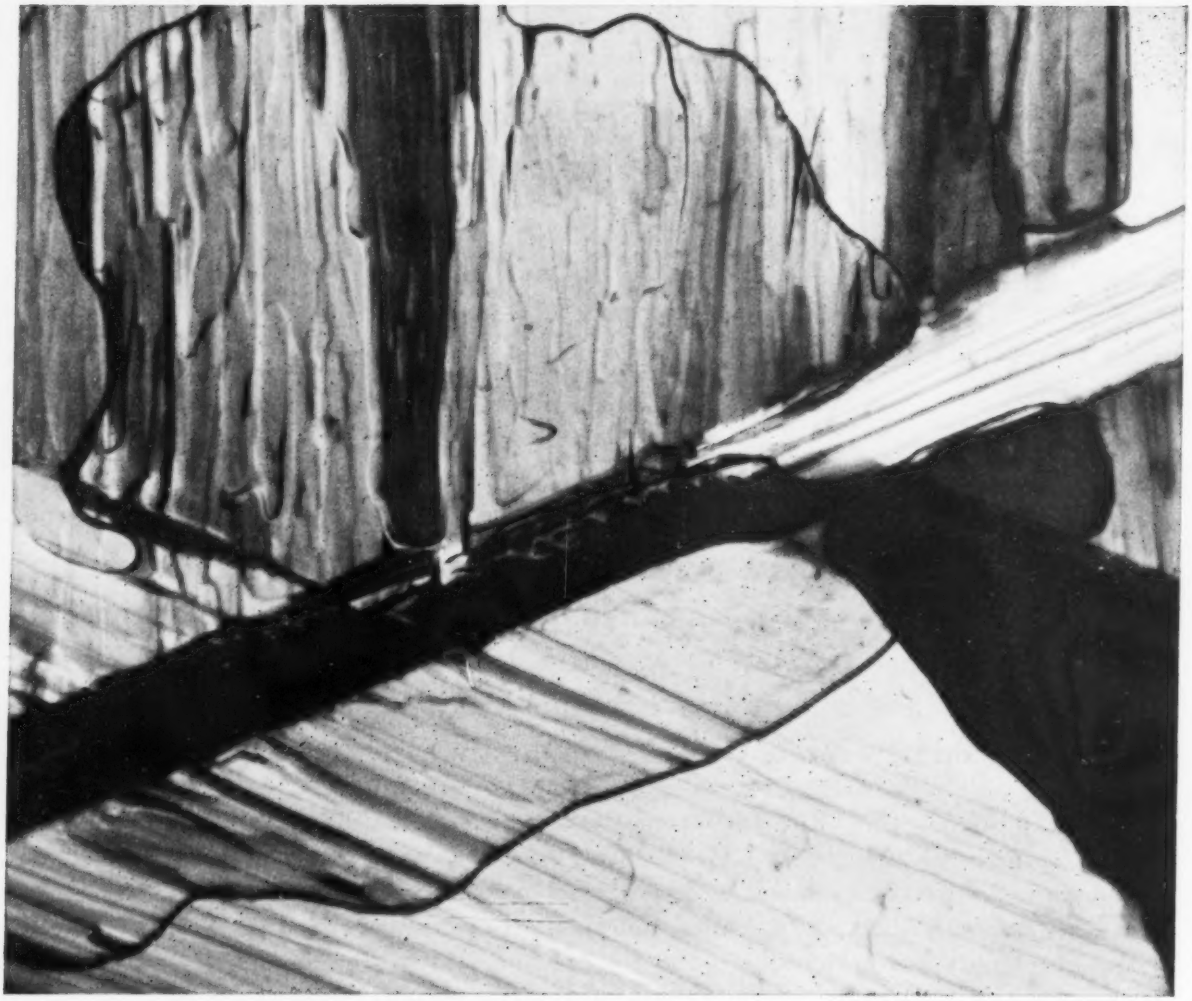
IMPROVED FOAM—New ALKANE "60" minimizes the need for foam additives. In *dishwashing foam tests* results showed the ALKANE "60" based product, without a foam additive, performing as well as dodecylbenzene products which included a foam additive. And in *washing machine foam tests* ALKANE "60", without a foam additive, performed as well as a typical dodecylbenzene with an additive.
Formulation savings and processing advantages can be obtained by substitution of ALKANE "60" sulfonate for foam additive.

BETTER DETERGENCY—In the Terg-O-Tometer detergency test, ALKANE "60" based heavy-duty detergents proved to be better cleaning agents than dodecylbenzene derived products. The ALKANE "60" based product removed more soil at all concentrations — performed well in both soft and hard water.

PROCESSING—ALKANE "60" can be sulfonated and processed into finished detergents as easily as ALKANE "56", without manufacturing modification. Product results are comparable to the high sulfonation quality obtained with ALKANE "56".

***ORONITE** will continue to supply ALKANE "56", the standard of the detergent industry*

ORONITE CHEMICAL COMPANY
A CALIFORNIA CHEMICAL COMPANY SUBSIDIARY
EXECUTIVE OFFICES • 200 Bush Street, San Francisco 20, California
SALES OFFICES • New York, Boston, Wilmington, Chicago, Cincinnati, Cleveland, Houston, Los Angeles, San Francisco, Seattle
FOREIGN AFFILIATE: California Chemical International, Inc., San Francisco, Geneva, Panama



The Shell chemicals listed below are sources for many important commercial products.

Familiar landscape?

The inquiring chemist explores many interesting product "landscapes" in his work. This photomicrograph shows crystals of *tertiary butyl alcohol* at 65°F. TBA, a Shell chemical with intriguing features, finds its way into a variety of industries.

Shell manufactures more than thirty industrial chemicals—among them *allyl alcohol* and *allyl chloride*. Because of the di-functional nature of these two products, they are used as intermediates in the synthesis of many important chemicals. Derivatives of allyl alcohol are widely used in drugs and cosmetics. Allyl chloride is an intermediate in the synthesis of resins for thermosetting plastics, varnishes, and adhesives.

Why not become better acquainted with Shell Chemical's products and technical services? Write or phone your nearest district office for our general catalog and information about your specific interests.

Acetone
Allyl Alcohol
Allyl Chloride
Bisphenol A
Epichlorohydrin
Ethyl Alcohol
Ethyl Amyl Ketone
Glycerine
Hexylene Glycol
Hydrogen Peroxide
Ionol® CP Antioxidant
Isopropyl Alcohol
Methyl Isobutyl Carbinol
Methyl Isobutyl Ketone
Tertiary Butyl Alcohol

SHELL CHEMICAL COMPANY
INDUSTRIAL CHEMICALS DIVISION

Atlanta • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco
IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited, Montreal • Toronto • Vancouver

SHELL

Take a Closer Look at Tripoly

If you can increase the Sodium Tripolyphosphate content of your synthetic detergents it will pay you to do it. Tripoly steps up the cleaning power of the components in your formulation, especially the wetting agents. Yet it costs less than those synthetics it replaces. The saving lets you formulate a better balanced detergent since you don't need to employ harsh alkalis to offset a high wetting-agent cost. The improvement shows up in your sales.

Blockson Tripoly is outstanding in its ability to control hard water. Its strong buffering action assures solution stability and it works easily into a wide range of formulations from dish and laundry detergents to floor, wall and metal cleaners. May we send you a data sheet or sample?

BLOCKSON

BLOCKSON CHEMICAL COMPANY

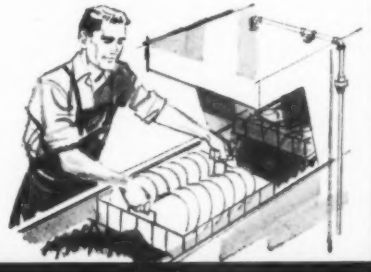
Chemicals Division

Olin Mathieson Chemical Corp.

Joliet, Ill.

TRIPOLY THE SYNERGIST

In dishwashing compounds, Tripoly's synergistic action boosts the detergency of the components and speeds grease removal. Enhances the free rinsing sparkle your formulation imparts to glassware.

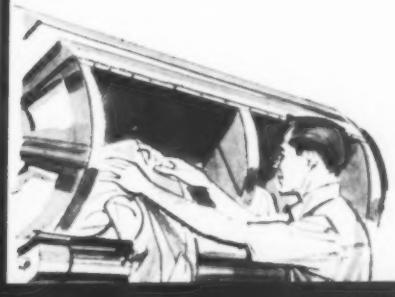


—THE SEQUESTRANT

In washing machine compounds, Tripoly sequesters the hardness elements. No insoluble precipitates adhere to fabrics or machine. Tops, too, for all non-ionic based controlled-suds detergents.

—THE PEPTIZER

In laundry compounds, Tripoly peptizes soils into a stable suspension that helps prevent redeposition on the wash. Result: whiter clothes, shorter wash cycle, less wear and tear on the fabrics.



ULTRA...YOUR BEST DETERGENT

NEXT—SHE ADDS YOUR DETERGENT. And whether she becomes a repeat buyer depends on its components. You can formulate harder working liquid or powder detergents with Ultra's line of quality components. For twenty years we have been supplying detergent manufacturers with outstanding ingredients which improve product performance or reduce production costs. Today, Ultra is the convenient, reliable, one-stop source for Sulframin® liquid alkyl aryl sulfonates, Ultrapole® superamides and conventional amine condensates, hydrotropes and other detergent raw materials.

SOURCE FOR COMPONENTS

IT'S VERY CLEAR that one of Ultra's hydrotropes should be incorporated into your liquid detergent. Acting as coupling agents, hydrotropes make the formulation of heavy duty liquid detergents easier...allow the increase of active ingredient concentrations in both light- and heavy-duty products. Ultra hydrotropes are the salts of xylene or toluene sulfonic acid. They are nonvolatile and can be safely handled in your plant. And Ultra's three strategically located plants serving the East coast, Mid-west and West coast assure quick, prompt deliveries to meet your manufacturing requirements.

STABILIZE THE FOAM BLANKET in your dishwashing detergents with Ultrapole superamides. In combination with Ultra's alkyl aryl sulfonates, they are particularly effective in the presence of greasy soil. Ultra's conventional 2:1 amine condensates find use in cosmetics and shampoos as foam stabilizers and thickening agents.

ULTRA IS PROUD to offer the technical services of its modern laboratories, specially trained personnel and up-to-date equipment such as this gas chromatography instrument to help solve your production problems, improve detergent products and lower production costs. Why not take advantage of this service? Call or write Ultra's nearest sales office.

ULTRA Chemical WORKS®

ULTRA CHEMICAL WORKS, Inc.

Department 5106

2 Wood Street, Paterson, N. J.

Division of Witco Chemical Company, Inc.

QUALITY
TALL
OIL
FOR
THOUSANDS
OF SOAP
FORMULATIONS

Thousands of soapmaking formulations call for tall oil and its derivatives. For their supplies of these essential materials, leading soap manufacturers turn to Arizona. These industry leaders know they can rely on the uniformity of Arizona's quality tall oil products. Uniformity that saves time and money, eliminates formulation adjustment, keeps processes constant, product quality consistent. They also rely on the swift dependability of Arizona service. Discover how you can benefit from Arizona quality, uniformity and service. Call Arizona next time you need tall oil.

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30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

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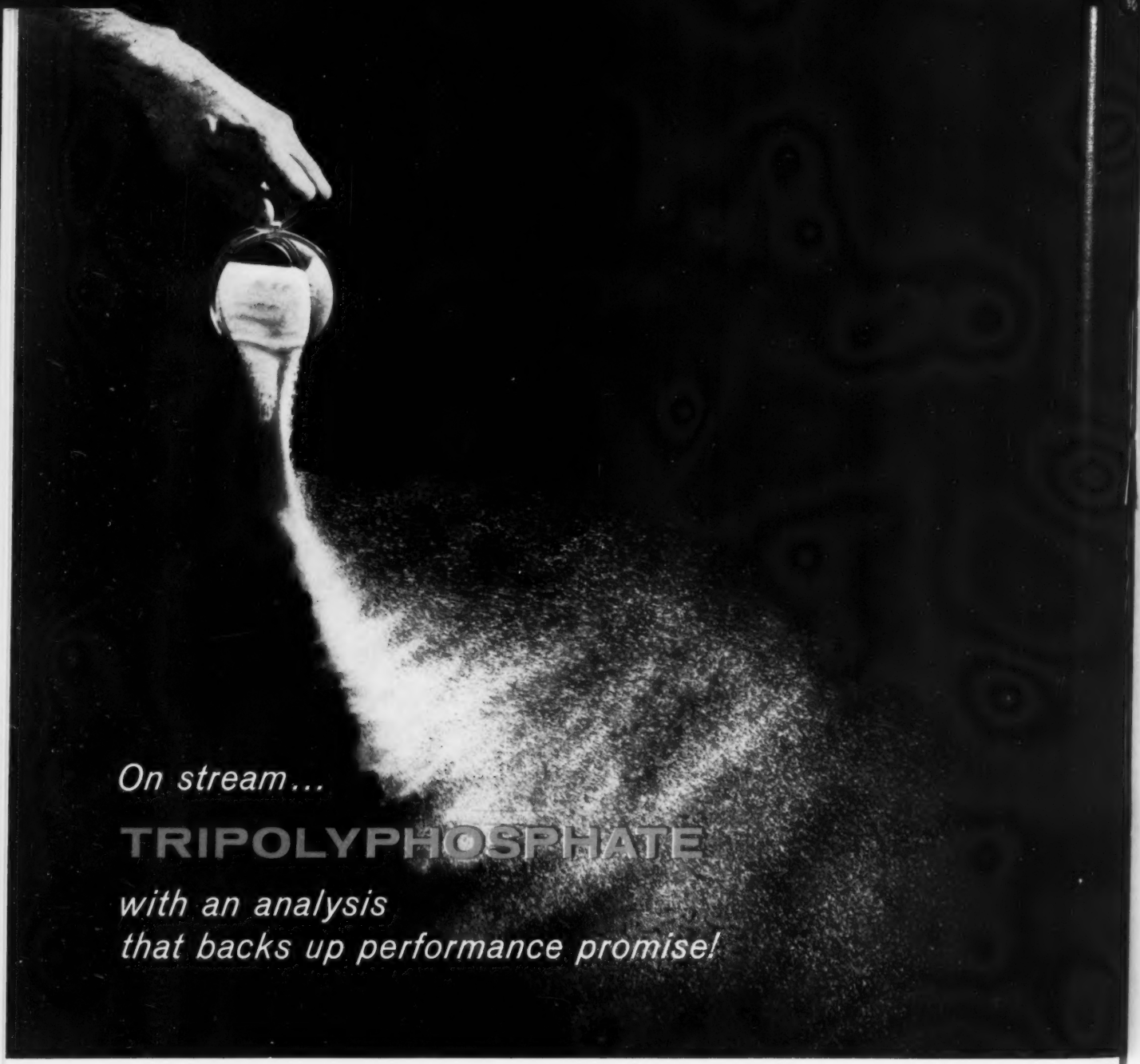
ACINTOL® Products:
ACINTOL D and ACINTOL DLR Special Distilled Tall Oil • ACINTOL FA 1, FA 1 Special and FA 2 Tall Oil Fatty Acids • ACINTOL R Tall Oil Rosin • ACINTOL P Tall Oil Pitch • ACINTENE® Terpenes

SCENTS

PFW

POUAK'S FRUITAL WORKS INC., MIDDLETOWN, N. Y.



TWO BENEFITS are yours in this most modern grade of "Tripoly." A special pre-mixing operation "locks in" the phosphoric acid to prevent losses in the calcining process. The result is an extra-high phosphate analysis. A carefully controlled spray-drying and calcining cycle has been designed to make Tripoly that handles easily and blends into packaged detergent products especially well. Compare AA Quality Sodium Tripolyphosphate with the material you currently use.

Samples from our new production are waiting your inspection. Why not write or call?

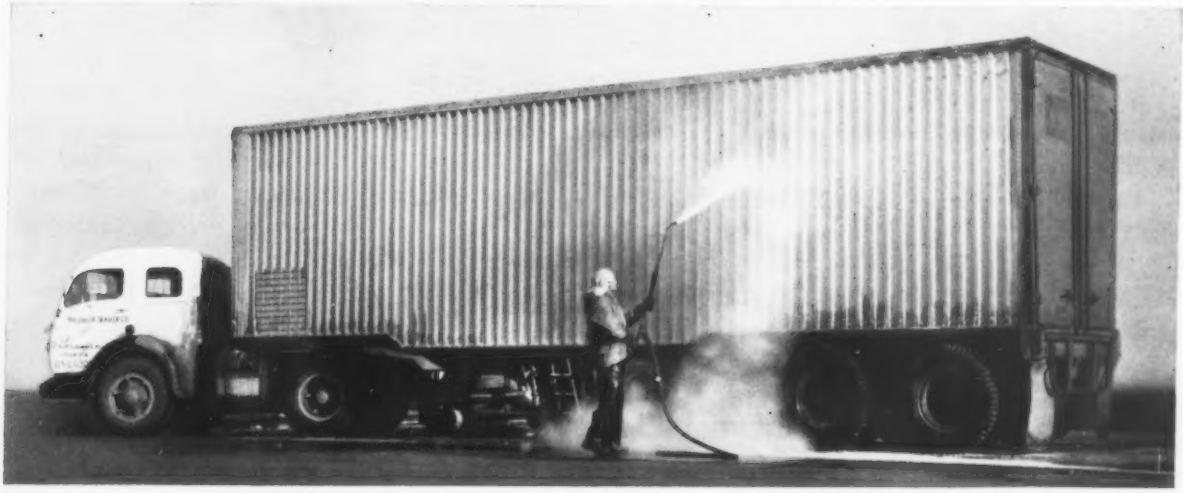
Top detergent quality in every granule...

AA QUALITY SODIUM TRIPOLYPHOSPHATE

AA QUALITY SODIUM TRIPOLYPHOSPHATE
AA QUALITY TETRASODIUM PYROPHOSPHATE
AA QUALITY TRISODIUM PHOSPHATE
AA QUALITY DISODIUM PHOSPHATE

Chemical Division
The American Agricultural Chemical Company
100 Church Street, New York 7, N. Y.

From washing delicate china . . . to heavy-duty industrial clean-ups



ATLANTIC ULTRAWET 60L® wets, penetrates, cleans, emulsifies

Put 60L to work in tough, heavy-duty jobs like factory and institutional clean-ups or on household and personal assignments like dishwashing or bubble baths.

Ultrawet 60L is a superior alkyl aryl sulfonate that works in hot or cold water, hard or soft water. It increases the efficiency of scouring powders, washing powders, cleaning compounds and sanitizers . . . emulsifies grease, speeds soil removal, keeps solids in uniform suspension, rinses readily and leaves no soap scum.

Leading compounders find Ultrawet 60L affords greater flexibility for all-purpose cleaners. In scrub soap formulations it allows a higher phosphate content with resulting clear solutions and provides controlled pH on alkalinity.

In its cosmetic applications, Ultrawet 60L gives copious quantities of luxurious suds, is easy on the skin and scalp, leaves hair soft and lustrous. It is immediately soluble in water, bright and clear even at temperatures below 20° F.

Available in liquid form, Ultrawet 60L product advantages add up to sales advantages for you. For complete information on our cost-cutting Ultrawets, write, call or wire The Atlantic Refining Company at the nearest office.

ATLANTIC
PETROLEUM
CHEMICALS

Philadelphia • Providence • Charlotte • Chicago • Los Angeles • In Canada: Naugatuck Chemicals Division of Dominion Rubber Company, Ltd. • In Europe: Atlantic Chemicals SAB, Antwerp, Belgium
In South America: Atlantic Refining Company of Brazil, Rio de Janeiro

fmc®

CAUSTIC has the stamp of APPROVAL

JANUARY MARCH
FEBRUARY

. . . AND ALL THROUGH THE YEAR!

FIRST CLASS CAUSTIC IS REC'D FAST BY fmc CUSTOMERS IN

BOSTON, MASS. · CHARLOTTE, NO. CAR. · CHICAGO, ILL.

. . . AND THROUGHOUT INDUSTRIAL AMERICA

SPECIAL HANDLING MEANS DEPENDABLE QUALITY!

SPECIAL DELIVERY FROM OUR STRATEGICALLY LOCATED PLANT IN SO. CHARLESTON, W. VA.

FOR COMPLETE INFORMATION CONTACT OUR NEAREST OFFICE POST HASTE!

CAUSTIC SODA Liquid 73%; Liquid 50%, Regular and Low-Chloride Grades; Flake, Solid and Ground
CAUSTIC POTASH 45% and 50% Liquid; Flake

fmc FOOD MACHINERY AND CHEMICAL CORPORATION®

Putting Ideas to Work
FOOD MACHINERY AND CHEMICAL CORPORATION
Chlor-Alkali Division
General Sales Offices
161 E 42nd STREET, NEW YORK 17

as the editor sees it...

ANTI-FREEZE . . . Anti-freeze sales for the calendar year of 1959 totaled 121,470,427 gallons, according to the survey figures of the Automotive Division of the Chemical Specialties Manufacturers Association recently released. This figure represented a gain of some 10 per cent over sales for 1958 when 110,216,357 gallons were sold. Of the 1959 total, 108,299,845 gallons or 89 per cent were of the ethylene glycol type while 13,170,582 gallons or 11 per cent were methanol. Returns from the questionnaire came from fifteen leading producers of anti-freeze.

With the growth of automotive vehicles in use, the increase in sales of anti-freeze is not too surprising. The big question in the minds of marketers, however, is the possible effect which the new all-year combination anti-freeze and coolant products may have on the future of the regular anti-freeze market. Three large chemical companies are now marketing these all-year combination products. Although the new materials appear to be superior technically, there are still several important questions marketwise to be answered. Time should supply the answers.

* * * * *

CLEAN AMERICA . . . Once again sales of detergents and soaps hit a new peak in the first quarter of 1960. According to the Soap Association, sales totaled well over a billion pounds with a value in excess of $275,000,000, the highest first quarter figures in history. Compared with 1959, volume was up 10.9 per cent, value 10.6 per cent. Add to this another 100 million pounds of scouring cleansers, and it all totals up to a new record.

Synthetic detergents continued to take an increasing share of the market, but at a retarded rate. Detergents made up 76.3 per cent of volume and 72.9 per cent of value. Liquid detergents continued to mount in tonnage, up 41.3 per cent in volume and 25.2 per cent in value. This seems to reflect lower prices on the whole for liquids, even though their sales growth is still spectacular. Scouring cleansers strangely showed a drop of about 4 per cent for the quarter. For the first time in many a moon, soap sales increased, rising 5.6 per cent in volume and 6.5 per cent in value.

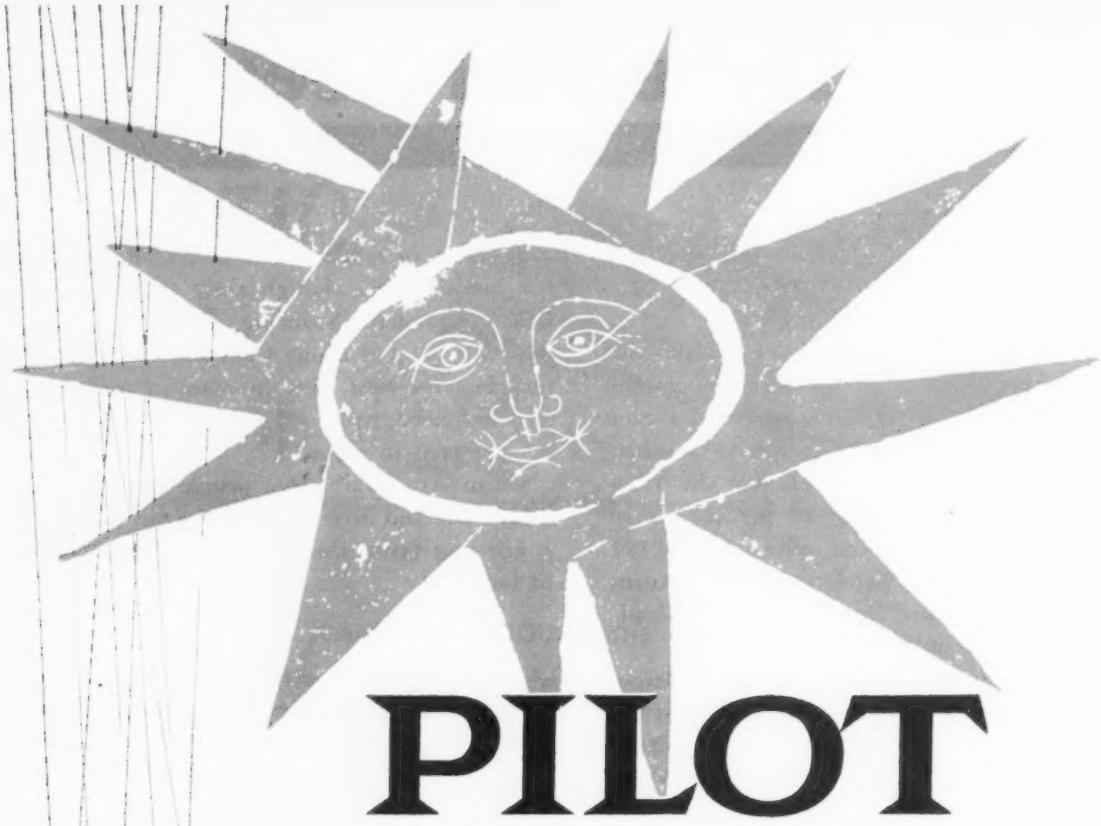
Clean America! More people must be using more soaps and detergents, or else our population is growing faster than we suspect. Maybe some of both.

* * * * *

LABELS . . . After examining many labels on containers for various and sundry chemical specialities, we conclude that on the whole, labels are poorly designed. And we don't mean artistically. From the angle of beauty, we have no complaint. In fact, it might seem that the artist is given a free hand while the fellow who knows what a product is and how to use it is truly forgotten in the mad scramble to give the package "shelf appeal" or whatever it is that arouses our shoppers to indulge in "impulse buying."

Our squawk is based mostly on meagre use directions. Oh, yes, we know that the percentage of users who read labels is woefully small, but for the sake of the few who can and do read, we feel the maker should tell them how to use and maybe how not to use the product. On some products, detailed use directions are obviously superfluous. But on others, they are necessary, very necessary. It is truly amazing how many relatively new products, ones with which users cannot be familiar, have insufficient directions or have them buried on the label in pee-wee type.

Misuse of a product can be a manufacturer's responsibility if the label fails to give adequate use directions. And we are not even considering any hazards which might be involved. Some of our leading marketers are at fault. If a package



PILOT

HD-90 *detergent flake*

...WORKS IN ANY KIND OF WEATHER

Remember last summer — recall processing problems? Forget them! For good! Pilot HD-90 is the reliable, all-weather alkyl aryl sulfonate that keeps production rolling along in high gear — even on the hottest, sticky, humid days. It is easier to measure and to pour, with fewer clean-outs. HD-90 is all-weather protection for your products, too.

Pilot HD-90 offers more detergent suds than any other material at a competitive price. That's because it's hard working — 90% minimum active drum-dried flake.

Pilot HD-90 is purer: odorless and whiter in color; dust-free and dry flowing. Pilot processes HD-90 at sub-zero temperatures, eliminating undesirable characteristics and building in the cleansing and sudsing character.

Don't wait until hot weather forces a shut-down. Prevent it by starting to use Pilot HD-90 now.

Packed in polyethylene lined fibre drums and 5-ply paper bags.

Write for literature and samples.

PILOT *Chemical Company of California*

P.O. BOX 22130 • LOS ANGELES 22

Manufacturers of
Sulfonic Acid
Dodecyl Benzene Sulfonates
Sodium Toluene Sulfonate

is beautiful and shoppers will grab it off the shelf, why bother further? That would appear to be the reasoning. In our book, it's faulty reasoning.

* * * * *

SPECIALTIES . . . In a newly opened laboratory, one of our largest basic chemical producers now houses in one center its widespread research on chemical specialties, their development, formulation and testing. The new laboratory consolidates research work in one place which was formerly carried on in a half-dozen scattered locations around the country. Over 100 chemists and other scientists will spend their full time working on chemical specialty projects, mostly projects involving products of the company's customers.

This new laboratory, we feel, epitomizes the extent to which the supplier of basic chemicals and other materials will go today to nurture his customers. Help them build good products and then sell them the materials from which to make them. The idea is not new. Suppliers have been doing somewhat the same thing in a sort of disjointed way for many years. But the idea of a single large completely coordinated laboratory working wholly in the broad field of chemical specialties is new.

So it would seem that the modern trend is distinctly toward more customer service, practically hand feeding the customer if necessary. The specialty manufacturer looks for service and quite obviously he gets it. Sometimes we have a feeling that he relies too much on technical guidance by his suppliers. But far be it from us to question what appears to be a most successful selling technique.

* * * * *

CHEAPEN IT . . . This early in the game we see indications that some marketers of private brand liquid detergents are cheapening their products. And their containers also where such containers are plastic. Obviously, in a desire to sell their private brand detergents at prices well below the nationally advertised products, the marketers are beating down the prices which they in turn are paying their suppliers. And the suppliers have one recourse. They must in turn cut their costs by cheapening the product, the container and everything else involved in the transaction. How else can they supply at a profit and stay in business?

For some time now, we have had a hunch that some of the private brand marketers of liquid detergents have been a bit hog wild in pricing their products at retail. The margin between private brand and national brand in our opinion has been too wide, unnecessarily wide to meet and beat competition on chain store shelves. We cannot conceive of relative costs permitting such large differences in price. That is, unless the private brand marketers were out to make bums of their national brand competitors, to show them up as it were.

Off hand, we would guess that some private brand marketers have a price bull by the tail. Cheapening product and container might at the moment look like an escape chute. But is it?

* * * * *

PINE TREE SOAP . . . Shades of the distant past! The purchasing agent for Cornell University called us from Ithica, N. Y. to find out where he could buy Billy B. "Davis" Pine Tree Soap. He probably meant "Billy B. Van's Pine Tree Soap" which was trade marked in 1929. It seems that the president of Cornell used a bar of this soap at a Minneapolis club, liked it and wants more. If the soap is still on the market, we haven't seen it in a long time. Old Billy's been dead for some years. The original soap was of the straight coconut oil variety and loaded to the ears with pine odor. Billy had his soap made by various soapers and he did the peddling.

To us, Billy Van's original soap was the wonder of the age in that he sold it to anybody the second time. But there were users who raved about it. To soapers, it was just another framed coconut oil soap and not too good a one at that. Billy sold lots of it and did real well until he got too ambitious, overextended himself and the banks took over his company. When we saw people choose Billy's soap in preference to a bar of good milled toilet soap, we wondered many times if soapers were not in reality throwing pearls to swine in giving the public ever better soaps. Now the president of a large university wants more of the stuff,—if it's the same soap,—and we're wondering all over again.

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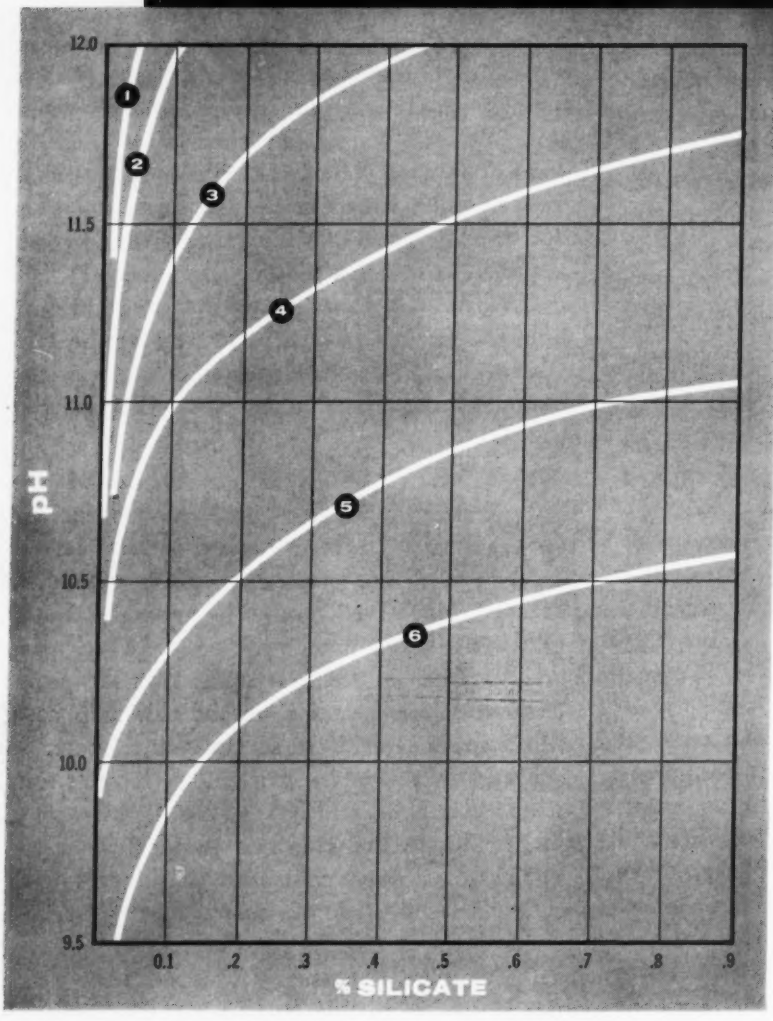

In the PQ Catalog there are over 50 soluble silicates (sodium or potassium) to fit your individual detergent formulations. The pH, for instance, can be placed where it is wanted by the use of PQ silicates of varying $\%Na_2O:\%SiO_2$ ratio. Plotted in the graph are pH vs. concentrations for five PQ silicates at 20°C. showing increase in pH at different concentrations and decrease in pH with the more siliceous silicates, (i.e., a lower alkali to silica ratio). Once established, the pH is maintained; again a function of the soluble silica.

If you would like a reprint which discusses the buffering effect of silica on pH, please mail your request to our general offices in Philadelphia.

curve . . .
1. **NaOH** • (caustic)
2. **$Na_2SiO_3.5H_2O$** • **Metso Granular,** sodium metasilicate pentahydrate
3. **$Na_2O:1.6SiO_2$** • **B-W** liquid sodium silicate
4. **$Na_2O:2.0SiO_2$** • **C** liquid sodium silicate
5. **$Na_2O:2.9SiO_2$** • **K** liquid sodium silicate
6. **$Na_2O:3.2SiO_2$** • **N** liquid sodium silicate

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as the reader sees it...

Pressure Packaged Foods

Editor:

One of our associates in Germany is interested in manufacturing pressure packaged food products such as the type of artificial whipped cream that is becoming popular in this country. He has asked us to help him locate the necessary supplies; check patent rights, etc., in this connection.

Can you let us know who makes the type of container necessary for packaging such products? We would be interested in knowing of someone that could license such manufacturing in Germany.

We would also like to know who manufactures machines and supplies the technique for mixing the proper ingredients and who supplies the equipment for packaging.

L. Horace Bailey,
President,
L. H. Bailey, Inc.,
New Orleans, La.

Any of our readers who would like to take a crack at answering Mr. Bailey's letter may do so. We'll also give Mr. Bailey the benefit of our thinking. Ed.

★

Australia Beckons

Editor:

You are, no doubt, aware of the great business surge taking place in Australia today.

And, the large sums of money invested by Americans, in this country, but little by firms interested in the manufacturing of soap and chemical specialties.

The purpose of this letter, is, therefore, to enquire if there are any firms, in the above categories, or any firms associated with the industry, interested in investing in Australia.

Or, if they do not want to invest here, may be interested in having their products manufactured by us.

We would also be prepared to act as agents for any firms interested in representation in Australia.

P. Munn,
Managing Director
Phil Munn and Co., Ltd.
Provident Ave.
Payneham,
South Australia

We suggest that any of our readers interested in investing in Australia get in touch with Mr. Munn. Apparently the soap and detergent producers have active sudsidiaries in the land "Down Under," since we frequently receive clippings and tear sheets from Australia telling of the marketing activities there of such firms as Colgate-Palmolive Co., Lever Brothers and Procter & Gamble. In fact, just today we received a tear sheet from "The Australasian Grocer." A headline on one page reads "Soap Price War Is On!" in New South Wales, where Colgate-Palmolive's product "FAB" was launched recently. In addition, Kiwi Polish Co., Melbourne, Australia, recently purchased a 60 per cent interest in the Australian manufacturing operations of Bon Ami Co., New York. Ed.

MM&R 65 Years Old

"From the Gay Nineties to the Atomic Age" is the title of a feature article published in the May issue of *The House of Magnus*, house organ of Magnus, Mabee & Reynard, Inc., New York essential oils and aromatics house. The article traces the firm's 65 year history from its foundation by Percy Cecil Magnus, Sr., who came to New York City from Rome, Ga.

★

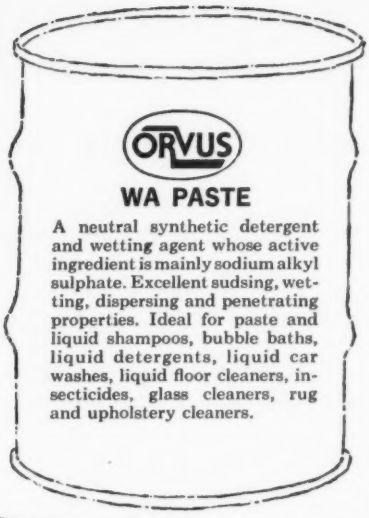
Dragoco Issues Brochure

A 36-page illustrated brochure has just been published by Dragoco, Holzminden, Germany, describing all phases of operation of the fragrance and flavor house which has a New York associate. Entitled "We Invite You," the booklet takes the reader on a "conducted tour" of the Holzminden plant, laboratories, offices and company-owned dwellings for employees. In addition to being informative the booklet is beautifully produced.

Harry D. Armitage, left, manager of the New York office of Emery Industries, Inc., Cincinnati, who retired recently after 35 years as a chemical salesman for the firm, is presented with the Distinguished Salesman's Award by president John J. Emery, right, while executive vice-president, A. W. Schubert, looks on. Scene of presentation was annual award dinner of the Cincinnati Sales Executives Council.

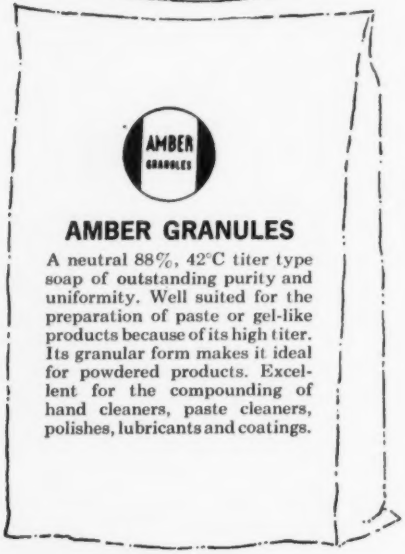
THERE'S A PROCTER & GAMBLE PRODUCT FOR EVERY FORMULATION NEED

A neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type. A light-colored liquid with a clean, pleasant odor. Its superior detergent, wetting and emulsifying properties offer excellent performance in liquid detergents, sanitizer detergents, self-emulsifying solvents, laundry detergents, glass, textile and dairy cleaners, insecticides, and bottle washing compounds.



WA PASTE

A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sulphate. Excellent sudsing, wetting, dispersing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, insecticides, glass cleaners, rug and upholstery cleaners.



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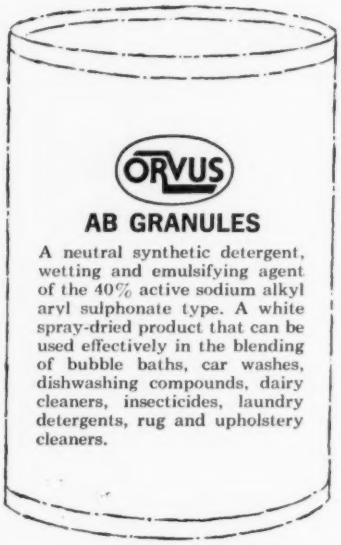
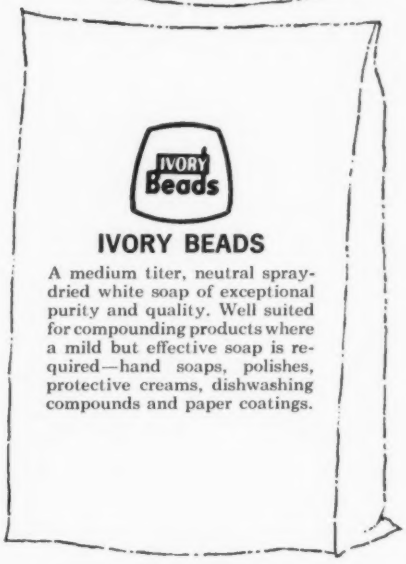
A neutral 88%, 42°C titer type soap of outstanding purity and uniformity. Well suited for the preparation of paste or gel-like products because of its high titer. Its granular form makes it ideal for powdered products. Excellent for the compounding of hand cleaners, paste cleaners, polishes, lubricants and coatings.



AB GRANULES

A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulphonate type. A white spray-dried product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.



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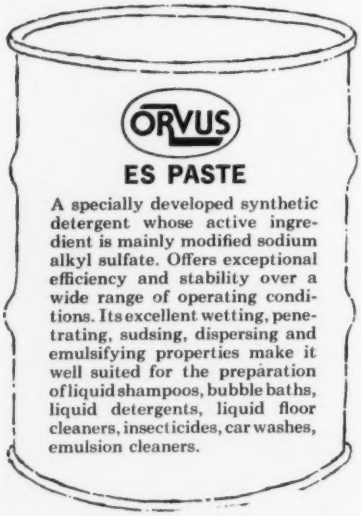
A medium titer, neutral spray-dried white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required—hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



ES PASTE

A specially developed synthetic detergent whose active ingredient is mainly modified sodium alkyl sulfate. Offers exceptional efficiency and stability over a wide range of operating conditions. Its excellent wetting, penetrating, sudsing, dispersing and emulsifying properties make it well suited for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.

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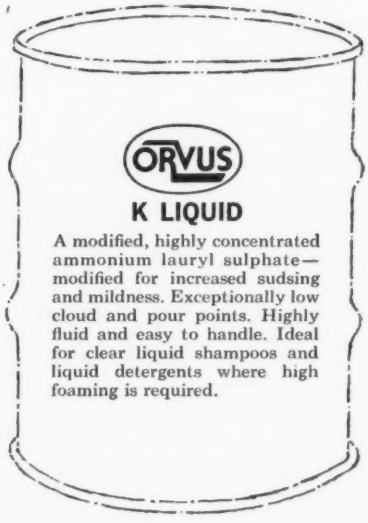

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Toiletries
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Edward S. Maurer, left, chief perfumer of Evan Williams, London chemical specialties and personal products firm, receives honorary membership certificate in American Society of Perfumers from Bernard Polak, Polak's Frutal Works, president of the Society. Presentation took place at sixth annual symposium of ASP in New York recently. Report of meeting appears on p. 54.

For some it is this: swell of sea, sweep of sky, sting of salt, boom of spray, and the sleek hull winging... a man's game in a fearnaught world. For others no less quick or bold, adventure comes in other challenges to mind and muscle. But to each of us, it carries its own cargo of sights and sounds and smells that move us and quicken our heartbeats in response and recognition. If you seek to pluck adventure from the air and put it in a flask or flaçon, Givaudan can help you. No one knows more about the uses of fragrance, or its ever-changing fashions. And no one has helped so many searchers for a special, unique fragrance find their perfect answer. Givaudan-Delawanna, Inc., 321 West 44th St., New York 36

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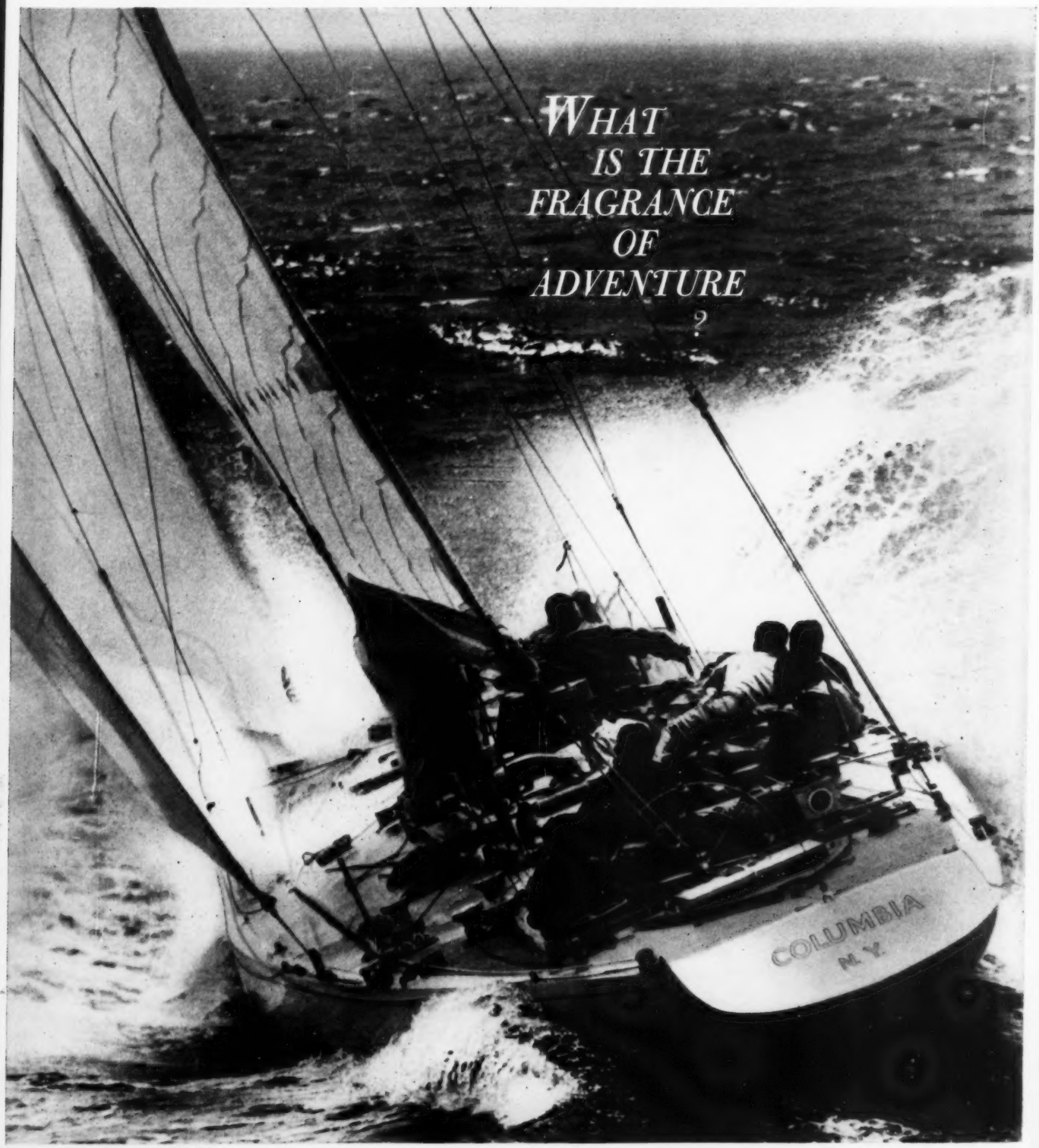

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Effect of different detergents on

Appearance of Home Laundry

washed in different appliances

By Florence Ehrenkranz*,
School of Home Economics
University of Minnesota
St. Paul, Minn.

ONE laundering variable of particular importance in the washing of bed linens, towels, and other articles which are laundered frequently is the amount and kind of soap or synthetic detergent used. Washer instruction booklets usually recommend that measured amounts of detergent be used and suggest trying a specified amount, such as one-half to one or one to two cups full. Many homemakers use a bleach in addition to soap or syndet.

From a homemaker's viewpoint, the reasonable amount of detergent to use for a laundry load logically would be the amount that will be rinsed out of the load in the washer cycle and will produce washed articles that are acceptable in appearance. Increasing the amount of detergent above this may result in cleaner appearing articles after the first few washes and somewhat dingy-looking articles later, if detergent builds up in the articles in successive washings.

Previous reports on home laundering research have emphasized factors related to cleanliness. The usual test materials for which objective data are reported are swatches soiled with a solution of a radioactive compound in oil (1, 2) or a solution of carbon black (3,4,5,6,7,8,9). Generally, results are reported for single washings, though Weaver (5) gives data for soiled swatches washed 50 times.

Subjective measurements have been used for measuring consumer satisfaction with clothing worn by children and laundered or dry-cleaned several times during the period of the investigation (10).

Objective data on changes in total and yellow-blue reflectances and subjective observations on appearance of naturally soiled pillowcases laundered in one household washer were reported by U.S.D.A. workers in April 1959 (11).

In general, characteristics such as the "hand" or feel of washed articles, change in color, and the build-up of detergent in articles washed several times have not been reported in the same detail as results on cleanliness obtained with different laundering procedures.

The present investigation was planned to determine the effect of detergents on appearance of bed sheets, pillow cases and towels used by participants in the project and washed in different automatic washers with minimum amounts of detergent. Detergent concentrations to be used were established by checking detergent build-up in unsoiled articles washed with several concentrations.

The three washers to be used in the actual test were washed with excessively soft water, i.e., zero-soft water with added packaged softener, and rinsed with zero-soft water. Three four pound loads of new sheets, cases and towels similar to those that would be used in the use-wash test were washed twice in zero-soft water. Then the loads were washed with several concentrations of five detergents at several temperatures in the three washers. The complete cycle of the washer was used with the control set for a regular-cycle, nine and one-half minute wash. The temperature of the water at the start of the wash cycle was between 113 and 140° F. for each washer. At the end of the cycle, the loads were rewashed in 113 to 140° F. water without added detergent. Suds on the second wash were assumed to be due to detergent that had not been rinsed out.

The loads and the washers were washed with excessively soft water and rinsed with zero-soft water between tests to insure, as far as practical, that no detergent remained in the load or washer from the previous test.

The preliminary work thus gave the amounts of detergents that could be used with initial wash-water temperatures between 113 and 140° F. in the three washers without appreciable suds formation in a second nine and one-half minute wash with water only.

*This investigation supported in part by research grant from Graduate School of University of Minnesota.

The actual use-wash test was designed for three sets of two loads, three detergents and three household washers. One set of loads was dried in a gas dryer, the second set in an electric dryer and the third in the dry cycle of an electric combination washer-dryer. Air-drying was not considered necessary since it was thought that the detergent would be almost all rinsed out of the load during the complete wash-rinse-extraction cycle. The flat pieces were ironed for several reasons. Retained detergent might be revealed by scorching during ironing. Ironing flat work is part of the complete laundering process for some homemakers. Ironed sheets were a bonus for the participants.

Six new loads consisting of one bath-size, and one hand-size terry cloth towel, two muslin sheets (twin or single size) and one percale pillow case were assembled. The loads with twin size sheets weighed approximately four pounds four ounces and the load with single size sheets three pounds 14 ounces. Two of the loads had white towels, two had pink towels, and two blue-green towels. The loads were washed twice in zero-soft water, dried and flat pieces ironed. Then they were distributed to residents of two home management houses.

For the first six weeks of the test, three participants used loads 1, 2 and 3 three days and nights and loads 4, 5 and 6 four days and nights. The loads were brought into the household equipment laboratories for washing twice a week. The first five washings were done with detergent in water of zero to two grains hardness. The sixth washing was done without detergent to check on formation of suds in the wash water. The towels were examined after drying and the flat pieces after ironing.

The loads then were washed in excessively soft water and in zero-soft water and given to the participants for an additional six weeks' use. In the second six-week period, six cooperators used the loads for a week between washings four times and for ten days two times.

Table 1.

Load (sheets, case and towels)	Soap or Syndet	Washer
1 (blue-green towels)	12.0 g. mild soap) (approx. 6/11 cup)	Combination washer-dryer. Three rinses. Rinse water temp. approx. 100° F.
2 (white towels)	26.6 g. all purpose controlled sudsing syndet (approx. 3 tablespoons)	Agitator type automatic. One overflow rinse. Rinse water temp. not controlled by machine; varied between 60° F. and 102° F. approx.
3 (pink towels)	32.5 g. all purpose high sudsing liquid syndet. (approx. 2 tablespoons)	Pulsator type automatic. One overflow rinse. Rinse water temp. approx. 104° F.
4 (white towels)	16.0 mild soap (Same soap as for load 1 but approx. 8/11 cup.)	Agitator type automatic. (Same washer as for load 2.)
5 (pink towels)	26.6 g. all purpose controlled sudsing syndet. (Same syndet as for load 2)	Pulsator type automatic. (Same washer as for load 3.)
6 (blue-green towels)	32.5 g. all purpose high sudsing liquid syndet (same syndet as for load 3)	Combination washer-dryer. (Same appliance as for load 1.)

As in the preliminary work, the washers were operated through a complete cycle with the controls set for a regular cycle, nine and one-half minute wash. On each wash day, the initial wash water temperatures were the same to within 5 degrees F. and were between 131 and 146° F. for all three washers. That is, over the entire period of the use wash test, initial wash water temperatures were maintained at 138 ± 8° F., a temperature range to be expected in homes where the water heater thermostat is set at 150° F. on wash day.

Table 1 summarizes the wash conditions used. Each of the six loads was washed with the same detergent and in the same washer for the full period of the use-wash test. Load 1 was washed with soap 10 times in the combination washer-dryer and load 4 was washed with the same soap 10 times in the agitator type automatic washer. Similarly, load 2 was washed with the controlled sudsing syndet 10 times in the agitator automatic and load 5 was washed with the same syndet 10 times in the pulsator automatic washer. Load 3 was washed 10 times with the high sudsing liquid syndet in the pulsator automatic and load 6 was washed 10 times with the same liquid syndet in the combination washer-dryer.

Since the loads were similar and used in approximately the same way by each participant, differences in appearance at the end of the test could be interpreted as follows: Differences *between* sets of loads 1 and 4 versus 2 and 5 versus 3 and 6 primarily were associated with the three detergents used. Differences *within* the set of loads 2 and 5 primarily could be traced to differences in the operating characteristics of the agitator automatic versus the pulsator automatic machine. Differences within the 3 and 6 set could be attributable to differences between the pulsator automatic and the combination washer-dryer. Finally, differences within the 1 and 4 set might be associated with the washers or with the quantities of detergent.

To evaluate detergent build up after six and 12 weeks the washers were first operated with zero-soft water but unloaded to check

whether any of the foaming agent in the detergents had deposited on the interiors of the appliances. Then suds formation due to foaming agent in the loads was checked by washing the loads in zero-soft water without added detergent. For four loads, only an unstable foam or no foam at all was noted. Some suds formation did occur for loads 1 and 6 which had been washed with the mild soap and the high-sudsing liquid syndet, respectively, in the combination washer-dryer. After six weeks small beads of suds were visible at the bottom of the porthole and after 12 weeks suds were visible throughout the load and on the surface of the wash water. The surface suds dissipated in about one minute after the wash period.

These observations indicated that, except for one appliance, the quantities of detergent used were such that the foaming agents in the detergents had not been deposited in the loads.

Appearance of Wash

Three home economists compared the washed and used articles with similar new articles that had been washed in zero-soft water. Articles were examined under natural daylight, a daylight incandescent bulb, white and daylight fluorescent tubes and an ultraviolet lamp. In general, the changes in appearance after 12 weeks were similar to those after six weeks, but more pronounced. The three viewers agreed on the appearance of the white and colored articles as given below. Comparisons are for used sheets, pillow cases and white towels versus new articles that had been washed in softened water. Appearance of the pink and blue-green towels is considered later.

Load 1; the used muslin sheets looked about as white as the unused sheets; the percale pillowcase was grayer.

Load 2; sheets looked whiter under natural light and more blue under ultraviolet light, while the pillow case looked less white under natural light and not as bright under ultraviolet light. The white towels were approximately comparable to the unused towels.

Load 3; sheets and pillow case were whiter under natural light and bluer under ultraviolet light.

Load 4; sheets were less white and pillow case and large white towel definitely grayer.

Load 5; the sheets were whiter and the pillow case more cream-colored under natural light. (This was the only case in which the viewers used the word "cream-colored." The iron content of the water was checked once, near the end of the test. It measured 0.1 ppm.)

Load 6; the sheets were much whiter and the pillow case whiter under natural light while sheets and case were bluer under ultraviolet light.

The four sheets from loads 1-4 and 2-5 and 3-6 were compared under natural daylight in a separate judging period. The sets of loads were rated as follows with respect to whiteness of sheets: set 3-6 best, 2-5 next and 1-4 last. This confirms the previous judging and indicates that 32.5 grams of the all purpose high sudsing liquid syndet was superior to 26.6 grams of the all purpose controlled sudsing syndet and 12.0 grams or 16.0 grams of the mild soap.

Pillow cases were compared within sets and were rated as follows: 6 whiter than 3, 2 whiter than 5, and 1 whiter than 4. The observations are consistent with observations made when the loads were compared with unused articles. But since single articles only were compared, the data are insufficient for rating the appliances.

Colored Towels

Early in the use-wash test (after the second washing), it was noted that the pink towels were graying—the hand towels more so than the bath towels. To check whether the graying was due to incomplete soil removal, to effect of some component of the syndet on the dye used in the towels, or to drying in a gas dryer, swatches of new pink towels were washed five times in water alone and five times in water with syndet. After each wash, some swatches were dried in the gas dryer used in the use wash test and some were air-dryed on a rack in the laboratory. All the swatches retained original pink color rather closely when matched against unwashed swatches. These observations on the pink swatches suggest that the graying of the pink towels probably was due, at least in part, to incomplete soil removal during laundering. This conclusion is attested by these two facts: 1. the pink towels showed graying after two washes with syndet 2. the graying occurred chiefly in the center or wear portion of the towels.

A homemaker who selected pink terry cloth towels similar to those used in this investigation might be unhappy with the color matching in a bathroom, unless the towels were washed cleaner than they were in this experiment.

The blue-green towels on the other hand retained color very well. These had been dried in the electric combination washer-dryer. However, here too, swatches of towel that were dried in air or in a gas dryer showed no marked change in color. It is possible that the drying of the towels in the electric combination washer-dryer had helped the towels retain their blue-green color. It is also possible that the blue-green towels actually had grayed and the graying was not apparent to the persons who examined them because visual evaluation of blue-green fabric for graying may not be as good as visual evaluation of white or pink fabric. Experimental data are not available on this precise point. But in judging whiteness of unsoiled *white* swatches laundered many times, observers seemed to consider yellowness and blueness rather than graying (11).

Detailed observations on appearance of bed sheets, pillow cases and terry cloth towels used by six cooperators and laundered in the

household equipment laboratories of the university are presented in the text. The articles could be washed 10 times in soft water with 16.0 grams of mild soap in an agitator type automatic, 26.6 grams of an all purpose controlled sudsing syndet in an agitator or pulsator type automatic machine, and 32.5 grams of an all purpose high sudsing liquid syndet in the pulsator washer without acquiring a build-up of syndet foaming agent. When washed with 12.0 grams of mild soap or 32.5 grams of all purpose high sudsing liquid syndet in a combination washer dryer, articles retained some syndet foaming agent.

The sheets in the loads washed with 32.5 grams of all purpose high sudsing liquid syndet in the pulsator automatic and in the combination washer dryer were judged to look cleaner than those washed with 26.6 grams of controlled sudsing syndet in the pulsator or agitator automatics and cleaner than those washed with 16.0 grams of mild soap in the agitator washer or 12.0 grams of soap in the combination washer dryer. However, pink towels washed with 32.5 grams of the liquid syndet in the pulsator automatic showed graying after two washings.

Under the conditions used in this use wash test, none of the three detergents completely meets the criteria for detergents indicated at the beginning of this report: namely, a detergent should wash household textiles clean and be rinsed out of the articles in the complete washing cycle. Hence homemakers who use two laundry products — detergent and bleach — may be realistic about their need for the second product to get clean-appearing bed linens and towels.

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    Furry, M. S., Bensing, P. L. and Kirkley, J. L. Part I — Unsoiled swatches washed in Launder-Ometer.

    Furry, M. S., Bensing, P. L., Taube, R. K., Poole, N. D. and Ross, E. S. Part II — Naturally soiled pillowcases washed and dried in household equipment.□

Survey on Detergent Market in Southeast

EMERGENCE of liquid synthetic detergents has made freight a highly important factor in considering the location of a synthetic detergent plant. On the basis of this axiom it is suggested that Georgia ought to have such industry to supply consumers in the Southeast. The suggestion is made and substantiated in a 56-page paper bound book entitled "Liquid Detergents, a Manufacturing Opportunity in Georgia," by Robert Van Genus, Engineering Experiment Station, Georgia Institute of Technology. The material was prepared for the Georgia Department of Commerce, Atlanta.

Colgate-Palmolive, Lever Brothers and Procter & Gamble do not have important soap and detergent plants in the Southeastern United States, according to this report. This area, including Alabama, Florida, Georgia, North Carolina, South Carolina, and Tennessee consumed about 61,500,000 pounds of liquid detergents in 1958. This figure is based on an estimated 3 lb. per capita consumption.

The survey covers market potentialities and present manufacturing and distributing facilities and current raw materials situation. Possibilities for establishing manufacturing plants in the Southeast are studied from three angles: A branch plant of one of the big manufacturers; a Southeastern firm affiliated with one of the big manufacturers; and a completely new and independent operation. Opportunities for diversification open to an independent local manufacturer of liquid syndets are reviewed and the question of local container production is covered.

Market data are shown in a number of charts and maps. One of the latter shows a market area for a hypothetical Lever Brothers plant at Atlanta.

Information in this report is based on consumer sampling surveys of one small and two medium sized towns; in interviews with supermarket and grocery chain buyers, detergent wholesalers and managers of individual supermarkets. In order to make spot estimates of required investments and manufacturing costs, equipment and raw material suppliers were approached and plants were visited whose packaging and filling problems resemble those of a liquid detergent manufacturer. The report necessitated nearly 100 visits.

...And One to Grow On

Story and pictures of the new home of Independence Chemical Co., ten year old company specializing in cleaning compounds

Frederick C. Binter, president of Independence Chemical Co. in his paneled office in firm's new plant in Gloucester, N. J. Firm is less than 10 years old.

IN the short space of ten years, Independence Chemical Co. has expanded its facilities from a tiny laboratory and primitive manufacturing and filling equipment to a large, fully equipped manufacturing plant of 36,000 square feet. Here, on North Railroad and Essex Streets in Gloucester, N. J., just across the Delaware River from the firm's previous location on historic old Water Street in Philadelphia, Independence manufactures a full line of cleaning and maintenance chemical specialties. Lack of space and increased sales of its private label hand soaps and washing compounds to jobbers and distributors of sanitary supplies compelled Independence to transfer its operations to new and much larger quarters.

At the Gloucester plant Independence Chemical Co. has five truck loading docks, as well as a railroad siding. In addition there is an acre of ground at the plant site which is currently used for parking. But most important, in the eyes of the firm's management, there is room to work and grow. To meet the demands for increased production of its line of cleaning and maintenance chemicals, Independence has equipped the plant with ribbon type blenders, rotating drum mixers, stainless steel mixing equipment, auger type fillers, and vibrating screens of large capacity and latest design. The new plant also boasts a tank farm of sizable proportions for storing liquids used in the firm's manufacturing operations. Other newly installed equipment includes automatic filling lines. In all the plant has a dry mixing capacity of approximately 10,000 pounds per hour.

New home of Independence Chemical Co. in Gloucester, N. J., is two-and-one half story brick building of 36,000 square feet of floor space. In addition to railroad siding, plant has five truck loading docks and extensive tank farm.

The entire plant has been designed by Frederick C. Binter, president of Independence Chemical Co., for speed, efficiency and utility. A practical chemist, Mr. Binter is at home in the laboratory, working out a formulation, as he is in the plant, solving a manufacturing problem.

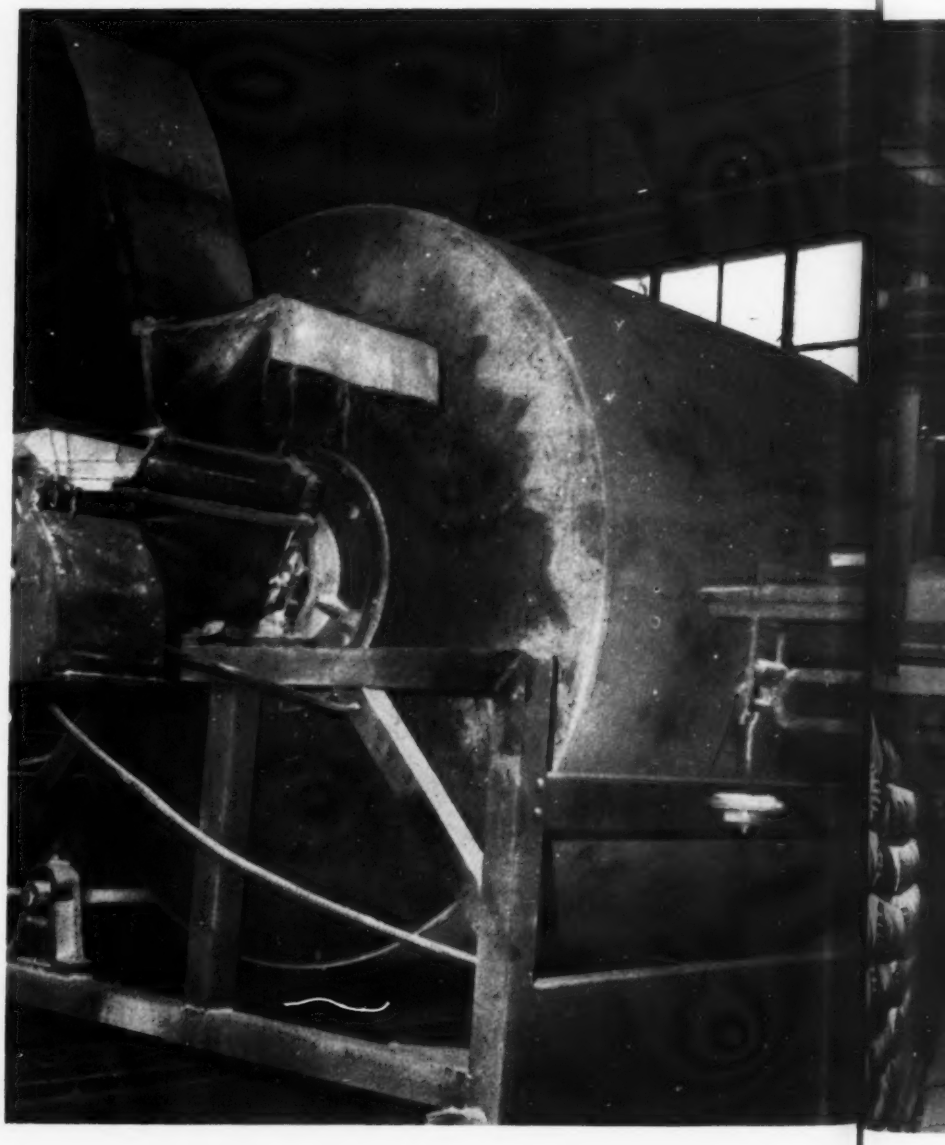
As with most chemical specialties manufacturing firms, the line of Independence is large and growing. Presently it includes germicidal hand cleaners in powdered and liquid forms; dishwashing

Red-white-and-blue design for Independence Chemical Co's products features reproduction of Independence Hall in upper left hand corner. Private label package, third from left, as well as all others in the firm's line feature bubbly design at base of package.

compounds for machine and hand use; synthetic detergents; stain removers, disinfectants and sanitizers for a wide range of uses; floor wax; wax strippers; floor and wall washing compounds. In the automotive chemical specialties field, Independence makes cleaners for car bodies, white wall tires, upholstery and motors. Under this heading, too, are steam cleaners and garage floor cleaners. Also in the cleaning field Independence supplies laundry compounds for industrial and institutional use, as well as for clothes washing at home.

A somewhat novel Independence product developed by Mr. Binter is "Dieseleen," used for neutralizing the irritating exhaust fumes of Diesel engines. This product is now sold and used through out the world.

The latest addition to the Independence line, which has as its trademark, "Indco", are pack-



Large scale, rotary drum mixer for powder products has been installed at new Independence plant to boost production rates.

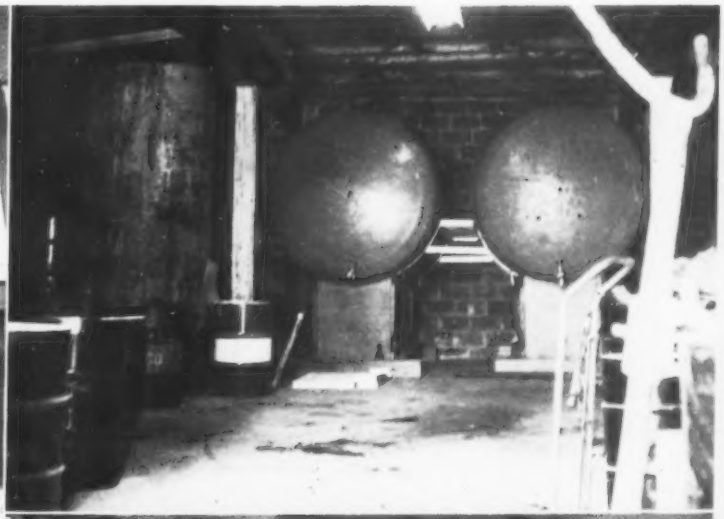
ages printed in three colors for the firm's line of private label hand soaps, borax and sal soda. These packages were shown for the first time during the 37th annual trade show and convention of the National Sanitary Supply Association at the Hotel Fontainebleau in Miami Beach, Fla., May 22-25.

Wheels take over (top, left) in plant of Independence Chemical Co., Gloucester, N. J., when large bags of raw materials must be moved from storage areas to mixing rooms. Plant layout is designed to assure smooth flow of materials.

Bags of raw materials in powder form are moved easily and quickly from one area of the plant to another by means of this conveyor belt system.

Volatile chemicals (top, right) are stored and mixed in separate 2,500 square foot building at Independence plant. Mixing and storage tanks are shown in background.

Modern materials handling devices speed plant efficiency and movement of cases of finished goods by pallets from filling section to loading platform for shipment as shown in bottom, right, photo.



Panelists, honored guest and officials of American Society of Perfumers at sixth annual symposium held April 28 in New York City. Left to right, Walter Lengsfelder, E. R. van Liew, panelists; Edward S. Maurer, newly elected honorary member; Oliver L. Marton, Alfred H. Moeller, panelists; Bernard Polak, ASP president; Fred C. Theile, panelist; and Frazer V. Sinclair, publisher of Beauty Fashion, Drug and Cosmetic Industry magazines, moderator of discussion period.

Perfumers' Symposium

HONORARY membership in the American Society of Perfumers was bestowed on Edward S. Maurer of London at the group's sixth annual symposium held April 28 at Essex House, New York. The program included two technical papers and a panel discussion of psychological factors in odor selection, odor acceptance and perfume formulation.

Mr. Maurer is chief perfumer of Evan Williams, manufacturer of chemical specialties and personal products and part of the Three Hands Products Ltd. group of organizations. A frequent contributor of technical articles to *Soap, Perfumery & Cosmetics* of London, he recently authored a book entitled "Perfumes and Their Production". Prior to joining Evan Williams two years ago, Mr. Maurer was associated with Lautier in England. Here he installed pressure packaging facilities to make test and sample aerosols for distribution to customers. Having started his professional career in explosives, Mr. Maurer later worked in the synthetic detergents industry. Bernard Polak, president of the society, presented Mr. Maurer with a certificate of honorary membership.

Chairman of the symposium was Walter Lengsfelder, Fleuroma, Inc., a director of the society. Mr. Polak opened the meeting and commented on the role of the perfumer in industry. The first paper, entitled "A Modern Approach to the Evaluation of Bergamot Oil" was presented by Fred C. Theile of Shulton, Inc. Mr. Theile's coauthors are Donald Dean and Robert Suffis, both of Shulton. Ultraviolet, infrared spectrophotometric and vapor phase chromatographic techniques are valuable tools in the

PAST PRESIDENTS: Former heads of American Society of Perfumers, l. to r.: Jacques A. Masson, Pierre Bouillette, Ernest Shiftan, A. F. Frascati and Oliver Marton.

evaluation of bergamot oil, where previously only olfactory and cumbersome wet chemical methods were at the disposal of the analyst. Mr. Thiele showed slides of analytical samples of bergamot oils which had passed the conventional tests stipulated in the *National Formulary*, but with new analytical tools adulteration was disclosed. This might consist of normal components of bergamot oil present in excessive proportion or of materials not normally occurring in the oil. Modern instrumentation also reveals differences in Italian and African oils.

Perfumery Pitfalls

Oliver L. Marton of Shulton spoke on "Pitfalls in Perfumery" which he said may be traceable to the extremely complex and unstable nature of perfume ingredients and to the shortcomings of human nature. Extreme light, heat and air sensitivity of most perfume materials, greatly varying physicochemical conditions prevailing in cosmetic and soap and detergent formulations, as well as in packaging materials, odor synergism and incompatibilities of perfume components are just a few of the natural pitfalls facing the perfumer. At his disposal are an infinite variety of tools and possibilities with an equally infinite number of possible errors.

Among the long list of human errors, Dr. Marton stressed the unfortunate results obtained by distorted test conditions. He cited the closed patch test as an example of unrealistic testing of a volatile material for skin safety. Certain tests involving incubation and a number of other shelf testing devices were critized as having but slight bearing on actual conditions of use.

Speaking on "Fragrance and the American Male", E. R. van Liew, Givaudan-Delawanna, Inc., pointed to the ever expanding market in men's fragrance items and perfumed toiletries. Man is slowly beginning to accept fragrance at least as a part of functional products, more or less in spite of himself. Officially he prefers pine and other "male" odors but actually he reaches for more subtle fragrances. This paradox is rooted in profound psychological factors, the speaker indicated.

Alfred H. Moeller, Noville Essential Oil Co. discussed the "Influence of Human Temperament in Odor Selection". Panels for evaluation of odors should not be chosen at random, Mr. Moeller contended. To find people who are temperamentally qualified to judge fragrance he suggested the use of constitutional psychology as systematized by William H. Sheldon. Varieties of human temperament are correlated to varieties of human physique according to Sheldon. Temperament, like human physique, is made up of three primary components, relative strength of which varies in different individuals. Evaluation of these traits along lines of Sheldon's trichotomy could help to pick the right people for an olfactory panel, Mr. Moeller indicated.

Abstract Concept

"The Abstract Concept in Perfumery", by Walter Lengsfelder of Fleuroma, drew a parallel between painting's evolution from objective to nonobjective to abstract art and certain trends in perfumery. From descriptive floral perfumes to modern perfume creations a development toward the abstract is seen. He demonstrated a new aromatic exhibiting a pleasant fragrance unlike anything occurring in nature.

Perfumers and patents are virtual strangers, according to Thomas Cifelli, Jr., of Richards and Cifelli, patent lawyers. Mr. Cifelli's subject was "Perfumers and Patents". Reasons for the strangeness is extreme secrecy observed by perfumers. The perfumer could profit by patenting new chemicals, established chemicals in new uses as perfume ingredients, new perfume formulations, and new containers or packages, such as aerosols, according to the speaker. In addition, he needs to protect himself against patent infringement by using patent searches, Mr. Cifelli pointed out.

Frazer V. Sinclair, publisher of *Beauty Fashion* and *Drug & Cosmetic Industry* magazines was moderator at the discussion period which concluded the technical program.

The symposium was followed by a cocktail hour and buffet supper.

Officers and directors of American Society of Perfumers at sixth annual symposium, left to right: Oliver Marton, Shulton, Inc., board chairman; John Hancock, Warner-Hudnut, director; Herbert Sommer, Prince Matchabelli, director; Edwin D. Morgan, Jr., Lever Brothers Co., treasurer; Mrs. Dorothy A. Douglass, Shulton, Inc., director; Elmer L. V. Sulik, International Flavors & Fragrances, Inc., director; Bernard Polak, Polak's Frutal Works, president; Edward J. Schuster, International Flavors & Fragrances, director.

Dr. Aaron B. Lerner (right) of the School of Medicine, Yale University, receives Special Award from H. J. Amsterdam of International Flavors & Fragrances, president of the Society of Cosmetic Chemists, at recent semi-annual meeting in New York.

Cosmetic Chemists Meeting Hears of Novel Bactericide

A NOVEL bacteriostatic and fungistatic agent for incorporation in soap, detergents, and cosmetics was introduced at the semi-annual scientific meeting of the Society of Cosmetic Chemists held May 12 at the Biltmore Hotel, New York. Described as a synergistic combination of 5,4-dibromosalicylanilide and 3,5,4'-tribromosalicylanilide, the compound was the subject of a paper by Herbert C. Stecker, Stecker Chemicals, Inc. and Richard E. Faust, Cuticura Laboratories. Presented by Dr. Stecker, the contribution's title read "A New Antiseptic Brominated Salicylanilide Composition for Soaps and Cosmetics."

A well known fungicide for both textile and dermal use, salicylanilide acquires antibacterial properties by halogenation, Dr. Stecker reported. Marketed under the brand name "Diaphene" the combination comes as a white powder of faint odor and relatively low solubility in alcohol and other solvents. Alkalinity and high temperatures do not affect "Diaphene," Dr. Stecker said, pointing out that this makes it highly suitable for incorporation in soap and related products. Formulation with anionic surface active agents produces no adverse effects on the activity of the

Below, left to right, H. J. Amsterdam, president of Society of Cosmetic Chemists addresses the meeting. Dr. Sophie Plechner of Carter Products, Inc., president-elect of the society, introduces medal eulogist, Dr. L. Earle Arnow, right, vice-president of Warner-Lambert Research Institute. He headed department at U. of Minn., where Dr. Lerner did initial research.

bacteriostat or on the storage stability of the product which also remains unaffected by pH, according to the speaker. "Diaphene" also exhibits high iron chloride tolerance, Dr. Stecker added. Toxicological properties of the antiseptic are good, he said.

Microbiological evaluation of "Diaphene" both *in vitro* and *in vivo* showed that 0.3 to 0.5 p.p.m. of the antiseptic in 10 per cent soap solution are effective against a wide spectrum of microorganisms and are capable of killing certain spores. The author compared the new compound with hexachlorophene on the basis of *in vitro* and hand washing techniques.

"Diaphene" was found active against resistant staphylococci and other gram positive bacteria.

Dr. Stecker described a modified fresh calf skin technique for evaluation of bacteriostats in soap, which involves use of an antiseptic soap bar. He also reported on substantivity tests on hydrated stratum corneum which showed presence of the compound after 72 hours.

Speaking of formulations other than soap, Dr. Stecker reported use concentrations of "Diaphene" in cosmetic formulations to range from 0.1 to 0.2 p.p.m.. The compound has been tried and showed promise in toothpastes, he said. It is dissolved in the oil phase prior to formulation.

Speakers and program chairman: E. Allen Newcomb, N. I. Malmstrom & Co., chairman of the program committee; Dr. G. Robert Clark, director of Cosmetic Division, Food and Drug Administration; Dr. Herbert C. Stecker, Stecker Chemicals, Inc.; H. I. Amsterdam, president of the Society; Dr. Richard E. Faust, Cuticura Laboratories; Dr. Sidney Riegelman, University of California School of Pharmacy; Dr. William Colburn, Colburn Laboratories, Inc., and Robert James, Shulton, Inc.

G. Robert Clark, director of the Cosmetics Division, Food and Drug Administration of the Department of Health, Education and Welfare, gave a short talk entitled "Cosmetics and the FDA—1960." The division's technical staff of three must process vast numbers of samples of great variety and complexity, Dr. Clarke reported. The problem is met by the use of new instrumentation and new procedures. The latter are incorporated in a laboratory. Vapor phase chromatography, ultra violet techniques, pH meters are among the modern armamentarium used. The division has a spectrophotometer capable of handling 80 analyses an hour. Adding machines and every other possible aid to speed and accuracy are applied.

In a paper entitled "The Pathogenesis of Alopecia," Dr. Norman Orentreich, New York dermatologist, exonerated shampoos as cause of hair loss. He went further and said that in most instances where cosmetics are accused of causing irreversible hair loss, other and far more drastic reasons of heredity or systemic misbalance are to blame. Dr. Orentreich's talk was profusely and effectively illustrated with slides.

Other technical contributions included "The Assay of Lyophylized Placenta Extract," by William Colburn of Colburn Laboratories, Inc.; "Effect of Vehicle Components and Sebum Constituents on the Absorption Characteristics of Sun Screens," by Sidney Riegelman and R. L. Penna of the University of California School of Pharmacy; "Molecular Forces in Permanent Waving," by Herman Bogaty, Toni Co.; and the "Use of Ternary Diagrams in Cosmetic Formulations," by Robert James and R. L. Goldemberg, Shulton, Inc. Chairman of the technical sessions was E. Allen Newcomb, N. I. Malmstrom & Co.

At luncheon the annual special award of the Society of Cosmetic Chemists was presented to Dr. Aaron B. Lerner, Yale University School of Medicine, by H. J. Amsterdam of van Ameringen-Haebler Division, president of the society. Dr. Lerner was honored for his work on factors controlling skin pigmentation. L. Earle Arnow, president of Warner-Lambert Research Institute, acted as eulogist. He was introduced by Sophie L. Plechner, president-elect of the society.■

Dr. Lerner, 1960 medalist, addresses luncheon meeting of Society of Cosmetic Chemists.

TGA Scientific Section Meeting

J. W. HAEFLE and R. W. Broge of Procter & Gamble's Toilet Goods Division receiving the annual CIBS (Cosmetic Industry Buyers and Suppliers) award highlighted the 31st meeting of the Toilet Goods Association's Scientific Section, held at the Waldorf Astoria Hotel, New York, May 11. Consisting of a scroll and a sum of money the award was made at luncheon by Lamson M. Scovill, eastern sales manager, cosmetic container division of Scovill Manufacturing Co., who is president of CIBS. The award is presented annually to the authors of the most meritorious paper published in the Proceedings of the Scientific Section during the preceding year. This year's award winning contribution is entitled "The Syntheses and Properties of Mercaptans Having Different Degrees of Acidity of the Sulfhydryl Group".

Donald Dean of Shulton, Inc., was elected vice-chairman of the Scientific Section. He will be installed at the section's December meeting, when Walter W. Edman of Evans Research & Development Corp., current chairman will step down and Herbert Heinrich of Coty Products Corp., present vice-chairman, will take his place.

Various aspects of toxicology dominated the first half of the technical program which consisted of seven contributions. Outlining a "Program for Dermal Toxicity Testing," Bernard Davidow of New Drug Institute stressed importance of checking animal tests by experiments on human volunteers. Both animal and human tests must be designed to answer the following questions: 1. Is there a likelihood of the test compound proving injurious to the user? 2. If so, to what degree and extent may injury be anticipated? 3. What form of injury does the damage take — sensitization, irritation, or systemic toxicity? 4. Is the injury reversible — does cessation of use, for example, reduce and alleviate the damage? 5. What consequences can ensue from special or unanticipated usage, such as accidental ingestion or if the preparation is inadvertently introduced into the eye? 6. What is the margin of safety in event of excessive dosage,

No single pattern of tests can supply the necessary evidence of safety due to the variety of compounds and applications involved, according to Dr. Davidow. Irritation, sensitization, and systemic toxicity require separate approaches. However, more important than prescribed procedures, is the human element, Dr. Davidow pointed out. Intelligent design of the testing program, and correct evaluation and interpretation of results are of the essence.

Bernard L. Oser of Food and Drug Research Laboratories, Inc., discussed the "Rationale and Interpretation of Toxicity Tests." He emphasized the difference in aims of a toxicological investigation of cosmetic or food ingredients on the one hand and drugs on the other. In the case of cosmetics or food additives the ultimate purpose of testing is establishment of conditions of safe usage, i.e. harmless or non-hazardous. By contrast, in the drug field the primary aim is establishment of pharmacologically effective dosage levels. This profound difference in objectives must be kept in mind by anyone responsible for experimental planning, Dr. Oser said.

Route, form, amount, frequency, and duration of administration or application of a test material in animal experiments must be correctly correlated to practical conditions of use. Interpretation of experiments must be subject to the same considerations. Adverse effects induced in animals by deliberately exaggerated dosage do not *per se* signify a risk under normal use conditions, the speaker stated.

Dr. Oser cautioned his audience to examine carefully the language of proposed cosmetics ingredient legislation from the following angles: effect on ingredients with long history of apparently safe use and degree of "expert" appraisal on which assessment of this history will depend; and nature of "scientific evidence" required to establish safety in use, particularly with respect to potential allergens or suspected carcinogens.

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Lamson M. Scovill, center, eastern sales manager, cosmetic containers division, Scovill Manufacturing Co., presents award of CIBS, of which he is president, to J. W. Haefle, left, and R. W. Broge of the Toilet Goods Division of Procter & Gamble Co. during annual meeting of Scientific Section of the Toilet Goods Assn., May 11, at the Waldorf-Astoria, New York.

PREMIUMS...

Sell Soap the World Over

By D. H. Trott*,
Advertising Manager
Overseas Division, Procter & Gamble

Part II

AND so we re-board our airplane and fly south. Upon landing, our pilot heads for the bull ring in Mexico City. Being in the soap business, however, we have no time for such diversions and go looking for more significant sights. We decide first of all to visit some typical Mexican soap outlets.

Mexicans give names to inanimate objects, among other things, trucks and grocery stores. One store we visit is called "De Todo Un Poco," or literally "Of everything a little."

Another one is named "La Corta Utilidad," or "The short profit." This dealer tells us it is not his fault he is short profit—it is the fault of that so-and-so competitor down the street.

And still another, with more truth than humor, is called "La Lucha Por La Vida," or "The fight for life."

"Star" was the name of the Mexican brand which was the prototype of the cracker-jack style of using permanent premiums. Child of necessity, with no precedent other than its candied popcorn namesake, it was an overnight success. "Star" brought a swift reaction from all sides, including one brand which offered a variety of toys.

Within one year after the "Star" introduction, of all the packages of synthetic detergent coming off the Mexican production lines, 95% contained some kind of premium.

Next stop Venezuela, where we are impressed by the architecture in the capital city of Caracas, but are more interested in getting closer to the business at hand.

As soon as the success of the cracker-jack style of permanent premiums became apparent in Mexico, it was quickly adopted in Venezuela, and was successful here as well. The Canadian style was adopted, too, and has become even more widespread than the cracker-jack style. Virtually all production of washing powder in Venezuela is devoted to brands with premiums inside the package. As in Mexico, it is difficult to find in any grocery store a package which does *not* have a premium in it.

Never-Ending Search

One aspect of the permanent soap premium in any country, is the never-ending search for new types of premiums. A combination of washing powder and food may not look very attractive, but ever since the Canadian lesson on the dangers of conclusion-jumping, no one is likely to rule out any premium possibility without at least testing it. One Venezuelan brand, therefore, currently is testing the appeal of olives, sausages, tuna fish, cooking oil, or lunch meat, packed right inside the carton.

Permanent premium offers are popular also on the continent of Europe, although not so all-pervasive as in Latin America.

Europe, Too, Succumbs

Let us stop first of all in France. France is a land of beauty, whether it be architecture, art, or women. We can expect to find beauty wherever we go, even in the pursuit of premiums.

In France, the cracker-jack style, or a modified version of it, is very popular. "Bonus" was the original brand in the field, and offers a cracker-jack variety of toys and useful articles. Competition did not let this pass unnoticed, and currently three other brands are offering an assortment of children's toys.

Italy followed the lead of France in introducing cracker-jack premiums only a year ago. Already there are three brands competing for position in what appears to be a growing market.

The latest European country to use permanent premiums of the type we have been discussing is Belgium where two cracker-jack brands just have made a simultaneous national bow.

It is expected that Belgian mothers will be as eager for these brands as mothers in other countries, and it is to be hoped that Belgian children will be as con-

*Presented at Premium Advertising Association Conference, April 5, 1960.

tented with the toy premiums as other children are.

And thus we near the end of our travelogue. We have flown over many countries without even landing, and we have examined premiums in only a few of the many ways in which they are used in foreign lands.

Language or creed is not a barrier to the appeal of premiums, or to that of the new detergents they help to sell. It is entirely possible, for example, to write "Tide" in Arabic, and to heighten its attraction by putting in the package an assortment of jewelry which we—but not an Arab—would call costume jewelry.

The way in which premiums have burgeoned in the world soap market has had some amusing and fascinating effects. Amusing to people outside the soap business. At times much *too* fascinating to the people in the business.

Take the buyer in a cracker-jack country, for example. Accustomed to contracting for raw materials by the carload, he suddenly finds himself wishing he had spent ten years buying for Woolworth.

Or the quality control man in the laboratory. In addition to checking the washing product coming out of the factory against the prescribed specifications, he must become also an expert on the chip resistance of china, the true roundness of marbles, the toxicity of purple crayons, or the tensile strength of a yo-yo string.

And he has to do all this without spilling his "Pepto Bismol" onto the litmus paper.

The production manager has to add to his normal work load the problem of getting the premium inside the package along with the proper amount of product, with no slow-down in his production rate. In a cracker-jack country, this can mean he has to receive premiums coming out of sixty different pipe lines, bring them together in one small spot, and throw them consecutively into a target area as little as one inch by four inches—while said target area is traveling down a packing line at the rate of 150 feet a minute. No wonder he feels at times as though he is trying to play a trombone in a telephone booth.

And the marketing man faces the unusual problem of how to promote a brand which already has a permanent promotion built in. He does this in a number of ways. On a Canadian style brand, he may cut the price temporarily. On a cracker-jack brand he might put a wrist watch in an occasional package, or even a coupon good for a hi-fi set.

A soap man who has lived with one of these premium operations for any length of time frequently can be recognized by his permanent frown or ulcer diet.

I have taken a great deal of time to describe these various overseas premium operations without touching on why they exist. You might expect that someone who is directly involved in the business could be quite articulate on this point. Unfortunately, I cannot do more than offer a speculation or two on the reasons for the popularity of these premium operations in foreign lands.

Appeal to Poor

One broad generalization which can be made is that the appeal of permanent premiums seems to have an inverse relation to the standard of living. The lower the standard of living the greater the appeal of premiums, and vice versa. Canada, which has both a high standard and a high premium development, appears to be an exception to this generalization. On the other hand, within Canada itself, premiums are more popular among the lower economic classes than among the higher classes.

Another observation is that the cracker-jack style of premium, in which the consumer does not know what she is going to get until after she has paid her money, enjoys its greatest success among populations widely conditioned to regular gambling. This might help explain the high popularity of the cracker-jack premium in Latin America, where government operated lotteries are an important source of public revenue.

Beyond these broad theories, it would be dangerous to go, since the individual circumstances in a specific country at a particular time

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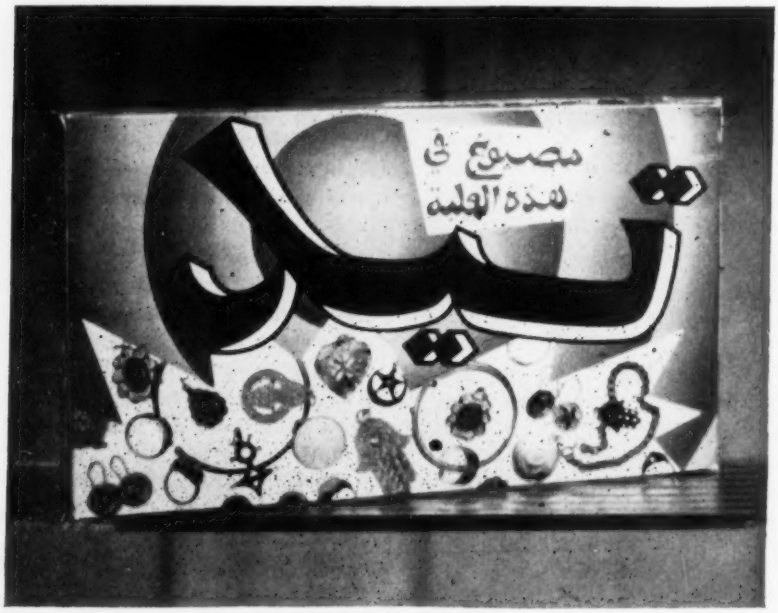
The Arabic version of "Tide." Assortment of premium jewelry is printed on face of package. One piece of this type jewelry is found inside each package.



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But what about comparative cost and ease of dispensing? Can these be proven or demonstrated just as convincingly?

The answer is unquestionably YES . . . *with the help of a Dema Liquid Proportioner.*

Users in every field have found that high-concentrate liquid detergents cost less than powdered materials—*when used properly.* And no other method of dispensing (manual or semi-automatic) provides the control or eliminates the guesswork so completely as a Dema proportioner.

This unique proportioning device attaches directly to the faucet and dispenses from any size bulk container through a flexible polyvinyl tube. It can be adjusted for a variety of liquid materials; and, once set, dispenses the same amount of concentrate every time for maximum efficiency and economy.

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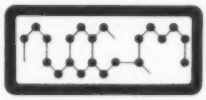

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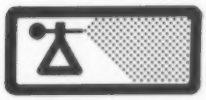

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CHEMICAL USERS' GUIDE

To General Chemical Products for the Soap and Detergent Industry

Product	*Available Forms*	*Commercial Strengths*	*Shipping Containers*	*Applications*
Sulfuric Acid H_2SO_4 + Water	Liquid	66° Be (93.2% H_2SO_4) 99% H_2SO_4	Carboys Drums Tank Trucks Tank Cars	Manufacture synthetic detergents; glycerine recovery; refining oils.
Oleum $H_2SO_4 + SO_3$	Liquid	Various 10%-70% free SO_3	Drums Tank Trucks Tank Cars	Manufacture synthetic detergents.
Sulfan® *Stabilized Sulfuric Anhydride*	Liquid	99.5% SO_3 min.	55 gal. Steel Drums Tank Cars	Manufacture synthetic detergents.
Hydrochloric Acid HCl + Water *(Muriatic Acid)*	Liquid	18°, 20°, 22° Be (27.4% to 34.1% HCl)	Drums Carboys Tank Trucks Tank Cars	Glycerine recovery.
Disodium Phosphate, Anhyd. Na_2HPO_4	Powder Flake	48% P_2O_5	Bags Fibre Drums	Builder in soap and synthetic detergents.
Trisodium Phosphate $Na_3PO_4 \cdot 12H_2O$ *(TSP) (Anhydrous Form Also Available)*	Crystal Flake	18.4% P_2O_5	Bags Fibre Drums Bulk Carloads	Soap builder; alkaline detergents.
Tetrasodium Pyrophosphate, Anhyd. $Na_4P_2O_7$ *(Pyro)*	White Powder	52.1% P_2O_5	Bags Fibre Drums Bulk Carloads	Builder in soap and synthetic detergents.
Sodium Tripolyphosphate, Anhydrous $Na_5P_3O_{10}$ *(Tripoly)*	White Powder	56% P_2O_5	Bags Fibre Drums Bulk Carloads	Builder in soap and synthetic detergents.
Sodium Silicate $Na_2O \cdot X(SiO_2)$ + Water	Liquid	38° to 60° Be Various ratios of Na_2O to SiO_2	Drums Tank Trucks Tank Cars	Soap builder and filler; in synthetic detergents.
Sodium Metasilicate, Crystal $Na_2SiO_3 \cdot 5H_2O$	White Granules Powder	29.2% Na_2O	Bags Fibre Drums	Soap builder; alkaline detergents.
Sodium Metasilicate, Anhyd. Na_2SiO_3	White Granules Powder	50.5% Na_2O	Bags Fibre Drums	Soap builder; alkaline detergents.
Sodium Sulfate Na_2SO_4	White Granules	99.5% Na_2SO_4	Bags Bulk Carloads	Extender in synthetic detergents.
Aluminum Sulfate $Al_2(SO_4)_3 \cdot 14H_2O$ approx. *(Alum)*	Commercial & Iron Free: Lump, Ground, Powder	17.25% Al_2O_3	Bags Bulk Carloads	Glycerine purification.
Aluminum Chloride, Solution $AlCl_3$ + Water	Liquid	32° Be 50.3% $AlCl_3 \cdot 6H_2O$	Carboys Tank Cars	Glycerine purification.
Sodium Bifluoride $NaHF_2$	White Powder	98% $NaHF_2$	Bags Fibre Drums	Souring agent.
Sodium Silicofluoride Na_2SiF_6 *(Sodium Fluosilicate)*	Powder	98% Na_2SiF_6	Bags Fibre Drums	Souring agent.

The products advertised are commercial chemicals having various uses, some of which may be covered by patents, and the user must accept full responsibility for compliance therewith.

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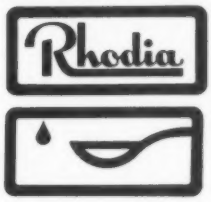

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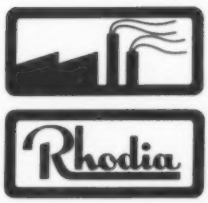

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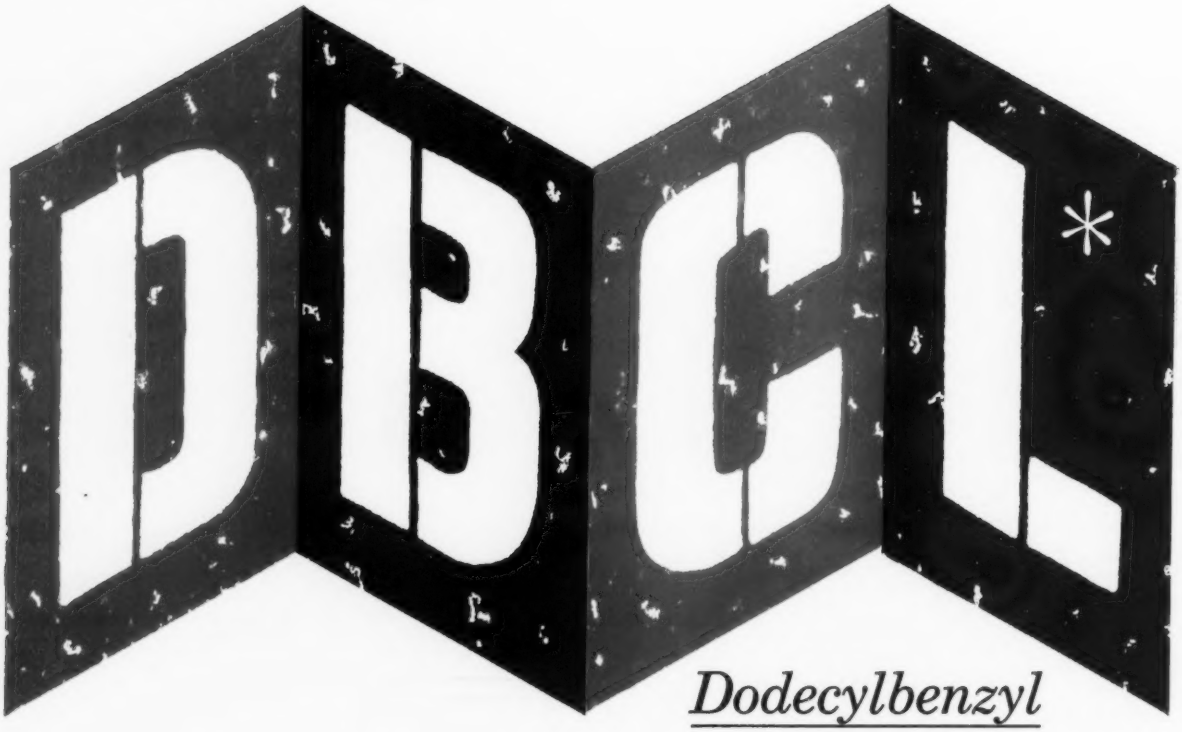

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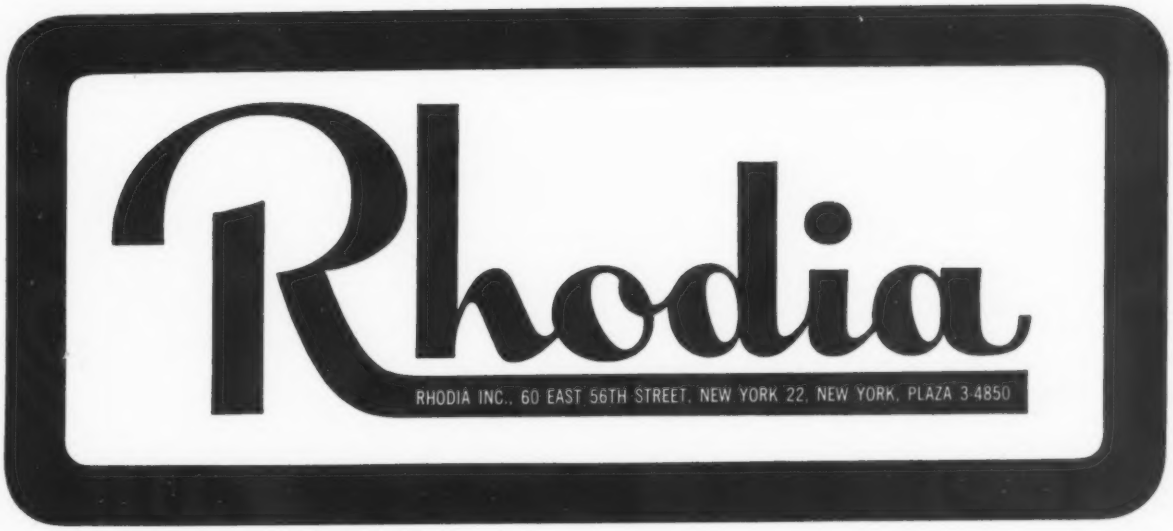
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George W. Fiero, Esso Standard Division, Humble Oil & Refining Co., New York, presides at largest midyear meeting luncheon of the Chemical Specialties Manufacturers Assn., in Chicago, May 17. Dr. Fiero is president of CSMA.

Proceedings . . .

PRINTED proceedings covering the 46th annual meeting of the Chemical Specialties Manufacturers Association, held on December 7, 8, 9, 1959, at Washington, D. C., are now available for general sale to non-members of the Association.

These published proceedings include all reports, papers and discussions at general sessions and divisional meetings. Also lists officers, board of governors, committee members and general association membership.

Proceedings are bound in a paper-covered volume, 252 pages, 8½ x 11. Sent postpaid at $7.50 per copy in the U. S.; $8.00 elsewhere. Checks should accompany orders. Also some copies of proceedings of prior CSMA meetings are available at the same price. Send orders or requests for further information to

A. A. MULLIKEN, *Secretary*

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SUMMIT CONFERENCE: Conferring at registration desk during 47th annual midyear meeting of the Chemical Specialties Manufacturers Assn., in Chicago, last month, were, left to right, A. A. Mulliken, CSMA secretary, Mrs. Lee Schapira, CSMA staffer, and H. W. Hamilton, executive vice-president, general manager, and "Mr. CSMA" himself.

CSMA Midyear Meeting

CONTINUED growth of sales of five groups of products was traced in surveys released during the 46th annual midyear meeting of the Chemical Specialties Manufacturers Assn., held May 16-18, at the Drake Hotel, Chicago. Surveys reported sales totals in 1959 for aerosols, antifreeze, auto waxes and polishes, brake fluid, and cooling system chemicals. Details on these surveys are presented in tabular and text form elsewhere in this issue.

Aside from the surveys, the program for the meeting, which had a near-record attendance of 908 registrations, covered a wide range of topics. Heading the list of government officials participating in the meeting was Earl Kintner, chairman of the Federal Trade Commission, Washington, D. C. Mr. Kintner discussed the Commission's "Guides Against Deceptive Advertising of Guarantees", adopted April 26.

Another government official, J. J. Kirk, Assistant to the Commissioner, Food and Drug Administration, discussed "Food Additives" during the general session, May 18. In addition to a prepared statement on what the new Food Additives Amendment to the Federal Food, Drug, and Cosmetic Act covers, Mr. Kirk answered questions from the floor.

Further light was shed on how the Food Additives Amendment affects chemical specialties at a joint session of the Detergents and Cleaning Compounds Division and Disinfectant and Sanitizers Division, May 18.

A highlight of the 46th midyear meeting was a symposium discussion of "Pharmaceutical Aero-

Hon. Earl Kintner, chairman of the Federal Trade Commission, discussing "Responsibilities of Government and Business in Our Free Market Economy" during luncheon meeting May 17.

sols." Details of the papers presented as part of the symposium are reported fully elsewhere in this issue.

In addition to discussions covering all phases of chemical specialties from research, production and marketing, all six CSMA divisions took time off to elect divisional executive boards to serve during 1961. Newly elected boards, listed below, take office following the 47th annual meeting in December. The meeting will be held at the Hollywood Beach Hotel, Hollywood Beach, Fla. Dec. 3-9.

New divisional executive boards nominated and elected are as follows:

Aerosol Division

Chairman, George Barr, G. Barr and Co., Chicago; vice-chairman, Don J. Templeton, Stanley Home Products, Inc., Easthampton, Mass.; board members, J. J. Buchanan, Continental Can Co., Chicago; R. Chris Canaday, Continental Filling Corp., Danville, Ill.; Russell P. McGhie, Colgate-Palmolive Co., New York; E. J. McKernan, E. J. McKernan Co., Elgin, Ill., and J. J. Tomlinson, General Chemical Division, Allied Chemical Corp., New York.

Automotive Division

Chairman, A. E. Tongue, Olin Mathieson Chemical Corp., Baltimore; vice-chairman, N. P. Gurley, Simoniz Co., Chicago; board members, Myron Frank, Dow Chemical Co., Midland, Mich.; J. M. Russ, Union Carbide Chemicals Co., New York; C. A. Weslager, E. I. du Pont de Nemours & Co., Wilmington.

Detergent and Cleaning Compounds Division

Chairman, Lester D. Berger, Jr., Union Carbide Chemicals Co., New York; vice-chairman, Robert K. Rigger, Wyandotte Chemicals Corp., Wyandotte, Mich.; board members, A. Baker, Vestal, Inc., St. Louis; Manuel N. Fineman, Puritan Chemical Co.; W. S. Jessop, U. S. Sanitary Specialties Corp., Chicago.

Disinfectants and Sanitizers Division

Chairman, Claude J. D'Angio, Airkem, Inc., New York; vice-chairman, reelected; Arnold Lada, Onyx Chemical Corp., Jersey City, N. J.; board members, C. W. Darby, Ralston Purina Co., St. Louis; E. Kitske, S. C. Johnson & Son, Inc., Racine, Wis.; C. Roland, Hagan Chemical & Controls, Inc., Pittsburgh; D. Roman, Monsanto Chemical Co., St. Louis.

Insecticide Division

Chairman, Mark Hill, Gulf Oil Corp., Philadelphia; vice-chairman, Alfred Weed, Olin Mathieson Chemical Corp., Asheville, N. C.; board members, Philip Hauser, Root-Lowell Manufacturing Co., National Steelwares Division, Chicago; John A. Rodda, Fairfield Chemical Division, Food Machinery and Chemical Corp., New York; Paul D. Torpin, McLaughlin Gormley King Co., Minneapolis.

Waxes and Floor Finishes Division

Chairman, Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind., reelected; vice-chairman, Gerard R. Di-

CAPTIONS, FACING PAGE

Top to bottom, left to right: Gordon M. Baird, Baird & McGuire, Inc.; H. W. Moburg, Rex Research Corp.; Charles E. Beach, John C. Stalfort & Sons, Inc.; Robert J. Hamilton, Antara Chemicals Division, General Aniline & Film Corp.; George Kachijian, Dow Corning Corp., and Daniel H. Terry, Boyle-Midway Division, American Home Products Corp.

Second row: John Powell, Modern Sanitation and Building Maintenance magazine; T. J. Wrocklage, Procter & Gamble Co.; Leslie Wizemann, National Aniline Division, Allied Chemical Corp.; A. K. May, General Aniline & Film Corp.; Herman Schulman, Intex Chemical Corp.; A. L. Saeks and Norman Wilson, both Puro Co.

Third row: Douglas Atlas, G. Barr & Co.; Fred W. McNess, Furst-McNess Co., and Kenneth Hartley, Dodge & Olcott, Inc.; Perry Bartlett, West Chemical Products, Inc.; Glenn E. Doerr, Federal Varnish Division; A. Robbins, Cartier Chemical Co., and Cyril S. Kimball, Foster D. Snell, Inc.

Fourth row: Robinson Tyler Gilbert, Bernard L. Sanders and Donald B. Peck, all of Fuller Brush Co., and Ben Perry, Perry Brothers, Inc. John Lyons, Dodge & Olcott, Inc.; Fred G. Taylor, Lehn & Fink Products Corp., and Vincent DeFeo, Dodge & Olcott.

Napoli, Masury-Young Co., Boston; board members, Al Candy, Candy & Co., Chicago; Cyril S. Kimball, Foster D. Snell, Inc., New York; Thomas B. Smith, Simoniz Co., Chicago., Howard J. Wilhoyte, Jr., E I du Pont de Nemours & Co., Wilmington, Del., and Donald E. Whyte, S. C. Johnson & Son, Inc., Racine, Wis.

Automotive Division, May 17

TECHNIQUES developed in the past two years which have contributed significantly to antifreeze performance testing were discussed in a paper, "Anti-Freeze Performance Testing—A Progress Report." The paper was by F. A. Gundlach, C. N. Moore, E. A. Zientak, E. Beynon, and J. G. Cessna of Union Carbide Consumer Products Co., a division of Union Carbide Corp., New York.

In the paper, presented by Mr. Gundlach, it was pointed out that the three-step concept of antifreeze performance testing reported at the 44th annual meeting of CSMA in 1957 remains unchanged. Some of the earlier techniques have been improved and several new test methods have been developed in the past three years. While the modernization of equipment and the study of more significant procedures is a continuing process, much of the recent work has been stimulated by the growing interest in the use of aluminum for automobile engines.

"With the advent of aluminum components in engine cooling systems, and the prospect of aluminum engines and aluminum radiators in the not too distant future, we have devoted a considerable portion of our evaluation program to the materials which might be used in these engines and radiators, the author stated. The techniques discussed in the paper were developed to answer questions on corrosion inhibition and heat transfer posed by new materials of construction.

The "many splendored facets" of marketing were described by Paul Francois, Marketing, Inc., Newark, N. J., as "product design, packaging, cataloguing, direct mail, dealer promotion and national advertising media." Speaking on the subject of "Marketing Is a Many Splendored Thing," Mr. Francois stated that "there is no sparkle to these facets unless upon their being viewed by the potential customer they create belief. Belief that the customer can resell the proposition and that it will be 'good for him and good for his customer'."

"The degree of success at-

MEETING

tained by a marketing effort," according to Mr. Francois, "depends upon how many people automatically and immediately develop an emotional impulse to buy—and sufficient comprehension of the product to be able to re-market the product."

A discussion of "How to Write Labels Under the New Laws from the Point of View of Toxicity," by John H. Foulger, M.D., a consultant of Wilmington, Del., was the concluding feature of the first session of the Automotive Division. According to Dr. Foulger, "new laws on the labeling of hazardous chemicals may require much closer scrutiny of the nature and properties of our products than we have made hitherto. These laws spell out animal tests to classify components as 'highly toxic' and requiring a 'poison' label or as less toxic but still needing the signal word 'danger'. So much attention has been paid to the so-called 'toxicity testing' of this minority of products that there has been a tendency to forget the large remainder to which the specified animal tests do not apply," according to Dr. Foulger.

The speaker also pointed out that "the specific end-result of the animal test is death of at least fifty per cent of animals used. But the new laws may involve labeling of all 'substances with the inherent capacity to produce bodily injury to man through ingestion, inhalation or absorption through any body surface'.

"Upon what information can we adequately label substances which do not, by the specified animal tests, require 'poison' or 'danger' labels? Will it be necessary to carry out time-consuming, expensive and often indecisive testing of such substances on animals?", the speaker asked.

Dr. Foulger further explained that "the new laws require on the label an 'affirmative statement of the principal hazard or hazards such as 'Flammable,' 'Vapor Harmful', 'Causes Burns', 'Absorbed through Skin', or similar wording descriptive of the hazard.

"They do not demand details of the ultimate 'substantial personal illness or injury' which might follow careless, unusual or unanticipated handling or use.

"The risk, i.e. the hazard of damage to the surface of the skin or of absorption through any body surface (which, of course, may be involved in inhalation or ingestion) may often be assessed by careful study of physical and chemical properties of a product and use of general knowledge of the behavior of living tissues when confronted with foreign substances. These physical and chemical properties should be part of the manufacturing 'know-how'. They are basic even to the planning of animal tests, if such are to be performed."

CAPTIONS: FACING PAGE

Left to right, top to bottom: E. L. Collins, Chilean Nitrate Sales Corp.; James E. Ferris, Hooker Chemical Corp.; Robert J. Milano, Millmaster Chemical Corp. Dr. John Foulger, consultant; C. A. Weslager, E. I. du Pont de Nemours & Co., and Charles E. Allderdice, Jr., Bell Co.

Hans Mannheimer, Miranol Chemical Co., Irving Bell, Time Chemicals, Inc., and Max Potash, Polyvinyl Chemicals, Inc. George Hartz, Prentiss Drug & Chemical Co.; Morton Schwarcz, Shulton, Inc., and Perry G. Bartlett, West Chemical Products, Inc.

William S. Jessop, U. S. Sanitary Specialties Co.; Robert K. Rigger, Wyandotte Chemicals Corp., and Donald Price, consultant. Mrs. Eleanore S. Wright, Lehn & Fink Products Corp., Miss Rebecca L. Shapiro, Hudson Laboratories, Inc.; Joseph J. Tomlinson, General Chemical Division, Allied Chemical Corp., and Clarence L. Weirich, C. B. Dolge Co.

Ira Bennett, Dodge & Olcott, Inc., Michael Lemmermeyer and Donald E. Lavelle, Aromatic Products, Inc., and Robert N. Allen, Wheaton Plastics Co. John R. Stoddard, Prentiss Drug & Chemical Co., Harold G. Lederer, R. M. Hollingshead Corp.; Harold V. Schmidt, Federal Varnish Division; Gordon M. Baird, Baird & McGuire, Inc., and Joseph G. Sinsheimer, Fuld Brothers, Inc.

Detergents and Cleaning Compounds Division

UTILIZATION of raw materials that were commercially unavailable in the early years of the development of surface active agents characterizes the most recent period in the history of surfactants. To a large extent this has changed the raw material base for surfactants from fats to petrochemicals, a trend which seems to be continuing. These observations were made by Dr. Donald Price, a New York consultant, who was the first speaker of the opening session of the Detergent and Cleaning Compounds Division of CSMA.

He also pointed out that in comparison with the early 'Thirties, when hundreds of patents on new types of surfactants were issued every year, recent years have seen few basic new developments. The last decade has been a period of widening applications of known surfactant types. The non-ionics have grown enormously because of their great flexibility which permits tailor making a surfactant for almost any application.

"Improper practices" by which physicians and personnel contribute to the problem of hospital-related infections include failure to observe rigid aseptic techniques and the misuse of antibiotics. This view was expressed by Dr. Harry B. Harding in a paper, "Hospital Cross Infection Control." Dr. Harding is clinical microbiologist at Evanston (Ill.) Memorial Hospital, and associate professor of microbiology at Northwestern University medical school.

Environmental factors concerned in the creation of this situation, according to Dr. Harding, include methods of cleaning, food handling, methods of handling and cleaning laundry and bedding, structural defects of the physical plant, certain careless practices such as overcrowding and allowing non-essential travel through patient-occupied areas.

To eliminate or check hospital cross infection Dr. Harding suggested continuing education of hospital staffs and personnel, establishment of a definite data-gathering program, action by an infection control committee, environmental changes, and the proper use of antibiotic drugs.

A method utilizing the Gardner Straight-Line Washability Apparatus to provide mechanical action for cleaning a standard soil from a vinyl tile substrate was described by Raymond L. Liss and Thomas B. Hilton of Monsanto Chemical Co., St. Louis. The title of their paper was "A Reproducible Method for Evaluating Hard Surface Cleaners." The method, based on Federal Specification PC-431b, is particularly applicable in distinguishing between proprietary household general purpose cleansers, the authors stated. They also said that results obtained using this method are quite reproducible and have been found to correlate well with practical in-place cleaning on a variety of soils and substrates. The method is further said to be "quite sensitive" in detecting the effect of minor formulation changes.

CAPTIONS: FACING PAGE

Left to right, top to bottom: Jack Linton and Laddie Strauf, Darling & Co. Milton P. Levy, National Chemsearch Corp.; Charles Mellick, Hysan Products Corp., and Earl Nicholson, National Chemsearch.

Dr. John J. Fish, Warwick Wax Division, Western Petrochemical Corp.; R. J. Beck, S. C. Johnson & Son, Inc., and George Petrie, Warwick. Jay C. Harris, Monsanto Chemical Co. and E. A. Schwoeppe, Procter & Gamble Co.

Harold Friedman and L. Z. Tanner, Jr., Zep Manufacturing Co.; Isadore Shaffiroff, Hysan Products Co., and Herbert Mellan, Durez Plastics Division, Hooker Chemical Corp. Richard Monahan and John Wittke, Oil Equipment Laboratories; M. N. Conville, Aerosol Packaging Co., and William Brosie, John C. Stalfort & Sons, Inc.

Sherman W. Harris, Continental Oil Co.; Brett Rich and Gordon C. Shields, both Purex Corp. David R. Eagleson, Emery Industries, Inc.; T. B. Smith, Simoniz Co., and John Cochrane, Monsanto Chemical Co.

Disinfectant and Sanitizers Division

A PANEL discussion of the "Value of Consulting Laboratories to the Chemical Industry" highlighted the first session of the Disinfectant and Sanitizers Division. L. S. Stuart, Pesticide Regulation Section, Agricultural Research Service, U. S. Department of Agriculture, was moderator for the panel.

A. Haldane Gee, director of bacteriology and toxicology, Foster D. Snell, Inc., New York, in discussing "How to Use a Consultant," pointed out that in the "right situation, the consultant becomes the shortest path to a desired business objective – and in the wrong situation, the longest way around. The consultant serves business management best when each understands how the other operates. The consultant should be sufficiently familiar with general business methods. The client, in turn, should have some understanding of the consultant's way of life," the speaker said.

He also made these points: "Four aspects of the client-consultant relationship are important if it is to be mutually advantageous. Primarily, the consultant and his staff are engaged as professional people, just as in the case of the company attorney, auditor, or medical adviser. The nature of the work and its outcome are confidential unless made public by joint consent. The arrangement, for best results, should be a continuing one. It should also be profitable, for both parties. Disappointments on either side can be attributed in most cases to lack of breakdown of one of these basic requirements."

The time to get the advice of the consulting laboratory is before trouble starts, according to Miss Rebecca L. Shapiro of Hudson Laboratories, Inc., New York. In her talk, "The Value of a Consulting Laboratory to the Chemical Industry." Miss Shapiro stated that "the majority of disinfectant manufacturers, particularly the formulators, look upon us as testing laboratories only, until something goes wrong, then we are at fault and are expected to become research laboratories, advisors, consultants and even lawyers.

"When we advise batch testing or checking," Miss Shapiro continued, "we are accused of being only interested in money and in increasing our business, but so are you and in order to do so, you must keep constant checks on your manufactured products and must know what your product can and cannot do."

Miss Shapiro added that "the small manufacturer or formulator usually gets his formulations from the producer of raw materials. He puts the product together and comes to us for testing—either by phenol coefficient, use-dilution or Chambers tests. If the product has the expected value, fine; if not we are at fault. If we ask about the formulation, we are prying—it is a secret. Actually, we are not interested in the formulation per se, but in order to do accurate testing we must know the type of active materials as well as their concentrations."

" . . . The consulting laboratory's greatest contribution and value . . . (is) in those areas where specialized facilities and specialized knowledge outweigh the facilities of industrial organizations, and where their guidance and interpretation of data they develop will open new avenues of effort and development." This view was expressed in a paper by Irving Gaines and Dr. Arnold Lada of Onyx Chemical Corp., Jersey City, N. J. The title of their paper was "What

We Expect from Consultants." Five reasons for employing the facilities of a consulting laboratory cited by the authors are:

"1. When specialized facilities are not available in our laboratories.

"2. When or own specific knowledge, in our judgment, is not as complete as is available elsewhere.

"3. When we seek confirmatory data.

"4. When we desire to extend our manpower facilities on a non-routine basis.

"5. When referee opinion is useful."

Mr. Gaines continued "to our way of thinking, the service that consultants must provide with the data they send with their bill for services rendered, is interpretation of the data and some guidance in terms of its usefulness. We do not expect product development programs for the price of a few laboratory determinations, nor do we expect to be guided by the hand through the woods. However, the situation we abhor most and that does more than any other single event to undermine confidence in consulting services, is the receipt of a bare test report and leaving comment, interpretation, prayer and blank horror completely up to the people who asked for the report."

Insecticide Division

USE of "Visual Aids in Household Insect Control" was discussed and illustrated in a presentation by M. P. Jones, entomologist, Federal Extension Service, U. S. Department of Agriculture. Flannelgraph material used in an ant control program in South Carolina was explained and shown by Mr. Jones. As a result of this ant control campaign and the use of visual aids workers in the state of South Carolina could account for the sale of 43,000 pounds of pints of insecticides for ant control during the year of the campaign.

Lack of knowledge on the part of the consumer of the household garden pesticides available to him and the proper method of using these products is the major problem in the expansion of this market. For "future growth and development of our industry, measured in sales of our products, we need to go on the offensive and aggressively inform the consumer of the benefits we are providing him," Harry L. Haynes of Union Carbide Consumer Products Division of Union Carbide Corp., New York, stated in his paper, "Garden Pesticides." These "benefits," are "easy and effective garden pest control to enhance the beauty as well as the value of . . . (the consumer (s) home and property.

The speaker further stated that "it is not necessary to point out the obvious emphasis put on all phases of gardening today. This is in our favor and is in the nature of free publicity and promotion. You hear that we are in an era of 'Do It Yourself'. This is the truth: 'You gotta do it yourself because you can't afford to have it done'. The emphasis on gardening and all its intricacies is a national hobby."

"The potential human hazard of insecticides or repellents applied to dairy cows and beef cattle must be recognized," a University of Minnesota entomologist declared in the concluding paper of the Insecticide Division meeting. In the paper, "Radioactive Tracer Work to Determine Possible Residues in Milk and Meat from Dairy Sprays," L. K. Cutkomp stated that "microanalytical techniques need to be employed to determine the presence or absence of a pesticide in milk and meat." He added that the use of isotopes, radioactive or stable, can greatly increase the sensitivity of the analyses."

The Isotope Dilution method was described by Mr. Cutkomp as a "simpler, more economical way of arriving at the desired sensitivity." The speaker also suggested that such a technique might profitably be incorporated in early toxicological studies on rats before the determinations are made on cows.

Waxes and Floor Finishes Division

"POSSIBILITY of differentation between properties of films prepared from emulsions by their stress-strain and stress-relation behavior" was reported in a paper by Kurt Gutfreund of Armour Research Foundation, Illinois Institute of Technology, Chicago. As a result of the investigation, which was reported on in Dr. Gutfreund's paper, "Viscoelastic Properties of Films Prepared from Emulsion Type Surface-Care Formulations," it is believed the information derived will "permit better evaluation of surface finishes and will provide data for the development of formulations with optimum performance characteristics."

According to the speaker, "a study of mechanical behavior of films prepared by casting of emulsion type surface care formulations on liquid mercury, disclosed dependence of stress-strain and stress-relaxation properties on the nature of these films and on humidity conditions. Measurements performed at different rates of elongation indicated the presence of a viscous component which became more pronounced with increasing humidity, as a result of plasticization by water. At 52% R.H., resinous films

(*Turn to Page* 91)

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Epolene HDE	1500	455	0.956	1
Epolene LVE	1500	400	0.939	5
Epolene N	2500	2500	0.928	1
Epolene HD	1500	340	0.938	0.5
Epolene LV	1500	360	0.925	3
Epolene C	7000	16,000	0.907	7

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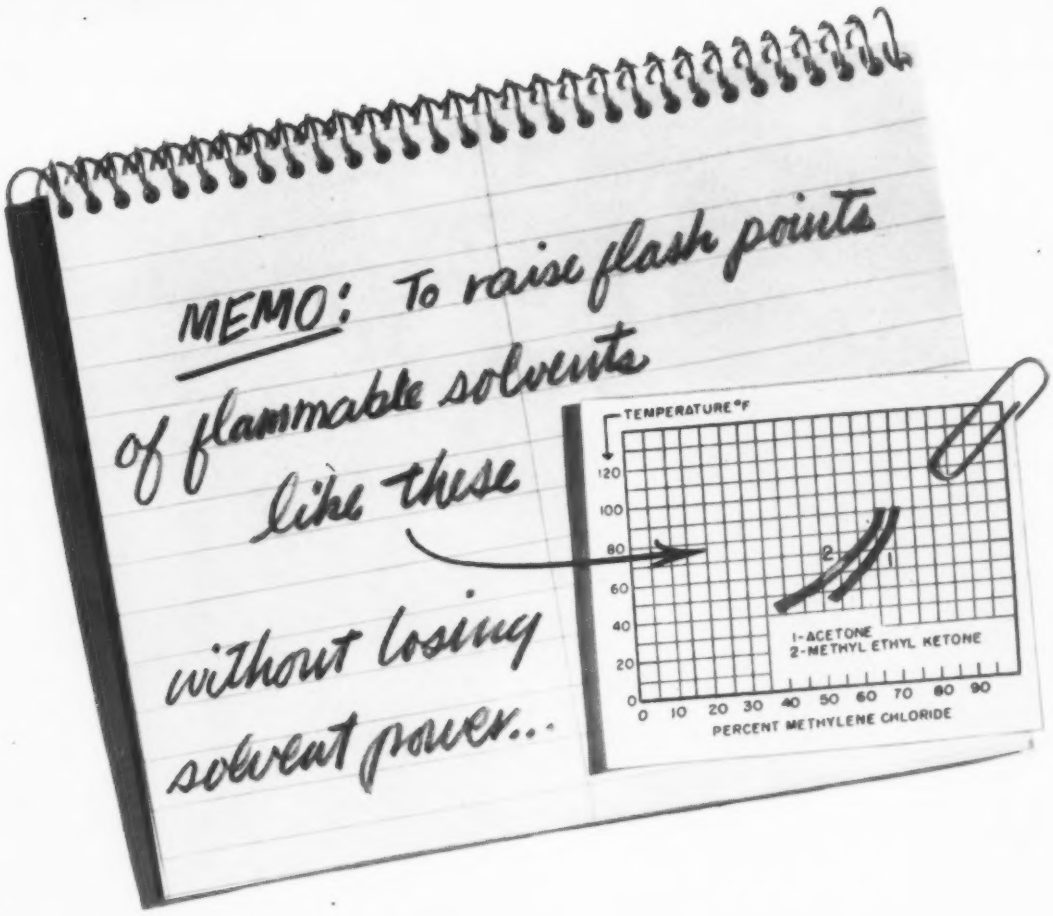

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(*From Page* 86)

exhibited distinct elastic behaviour, while a considerable tendency toward flow was found in polymer-based and buffable films. The relatively low strength of the latter typifies the behaviour of low molecular weight materials. Polymer-base films were characterized by exceptional toughness as demonstrated by the appreciable strength and significant elongation. Comparison between resinous and mixed resinous-polymer films revealed a greater viscosity component in the latter at 52% R.H. The observed differences, however, became insignificant at lower moisture conditions (20% R. H.)."

Further, the author pointed out, "the equilibrium moisture content at a given humidity varied between different samples, and at 52% R. H., the medium test conditions, amounted to 12.1, 3.0, 2.7 and 4.6% for 110, 120, 130 and 140 films, respectively. The relatively high water content in resinous films, compared with polymer-base or mixed resinous-polymer films, did not decisively affect their toughness. Apparently, chemical composition of emulsions exerts a dominating influence on mechanical properties of films."

A comparative study of the merits of styrene-acrylic copolymers as compared with polymer blends in floor polishes was reported on in a paper by Henry Merken and Raymond J. Stankus of Polyvinyl Chemicals, Inc., Peabody, Mass. Among the conclusions reached by the authors was that polymer blends generally exhibit higher gloss than copolymers. "In any system containing styrene, whether as a blend or in a copolymer, the addition of plasticizer improved the gloss," they reported. In addition, "the degree of improvement was noted most in systems with about 50% or higher styrene content. Good gloss was noted in all plasticized systems. The blends of two commercial polymers (an acrylic and a styrene) gave results quite in line with the experimental blends."

Leveling was found to be "excellent in most of the floor polishes studied, the authors reported. "In copolymers with 50% or higher styrene content, plasticization was required for good results."

Other findings were that polymer blends were "superior" to copolymers; copolymers and blends of polymers gave similar results in removability; in unplasticized systems, water spot resistance was "unsatisfactory" until acrylic contents of 50 to 75% were used, with blends slightly "superior" to copolymers; copolymers showed greater scuff resistance than blends in plasticized systems containing 25 to 75% of either styrene or acrylic; soil resistance was equivalent for both unplasticized blends and copolymers; copolymers were "consistently superior" to the blends in all systems; blends demonstrated "superior resistance" to powdering over their equivalent copolymers, unplasticized or plasticized.

The use of a performance report form, "a necessary tool in any (floor finish) performance evaluation procedure," was described and explained by George Robertson, of Equitable Life Assurance Society of the U. S., New York. Mr. Robertson's topic was "Evaluating Synthetic Finishes for Resilient Flooring: Some Views and Comments." According to Mr. Robertson, his company depends almost entirely on actual use tests in evaluating floor finishes.

Mr. Robertson prefaced his remarks by pointing out that he knows of no resilient flooring that "never requires application of a floor dressing or finish."

In actual performance testing, Mr. Robertson suggested that the test area be "adequate" in size: five to seven thousand square feet. He also declared that a new floor finish should be eliminated from further testing for only one reason: "lack of adequate slip resistance." "Provided a traction test indicates the floor finish is safe to work with," he stated, "it may take several complete refinishing cycles to place the finish in its own environment and thereby develop its properties fully. Staying with a finish long enough is the only way to learn to cope with its sometimes temperamental nature," Mr. Robertson concluded.

Aerosol Division

CONSIDERATIONS in "Package Development of Ethical Pharmaceuticals," as outlined in a paper of that name by John J. Graham of Schering Corp., Bloomfield, N.J., include, among others, the following: Whether to do one's own filling or have the product handled by a contract loader. If it is decided to use the services of a contract filler, the pharmaceutical marketer should make sure the loader has a separate line for pharmaceutical products. In addition, the packager must have adequate quality control. Research and development of pharmaceutical products must be done by the marketer, whose responsibility it is to work out new dosage forms.

Valve manufacturers will have to spend more money to develop better, more accurate valves, according to Mr. Graham, who pointed out that container makers will have to concentrate on producing more small size units. Most pharamaceuticals are packaged in containers of three ounces or less, according to Mr. Graham.

"There are two basic problems in the sterile filling of aerosol products," Carl Stearns of Lederle Laboratories Division of American Cyanamid Co. pointed out. The first involves providing sterile components and the second requires maintenance of this sterility until

Left to right, top to bottom: Donald S. Tuttle, Jr., Risdon Manufacturing Co.; Anthony Iannacone, Fluid Chemical Co. Robert L. Williams, Givaudan - Delawanna, Inc., and Ralph Boalt, J. R. Watkins Co.

John D'Elorza, Old Empire, Inc.; Sylvan Lefcoe, Par Industries, Inc. Y. Cid Fernandez, Chemex Industries, Inc., and Kurt Wasserman, Hostawax Co., a division of Hostachem Co.

Joseph E. Lee, McLaughlin Gormley King Co., and Clarence Carter, Continental Filling Corp. J. L. Perlman, B. T. Babbitt, Inc., and William Block, Olin Mathieson Chemical Corp.

Philip Hauser, Root-Lowell Manufacturing Co., National Steelwares Division, and A. W. Bevernick, Prentiss Drug & Chemical Co. James Lewis, Polyvinyl Chemicals, Inc., and Wilbert Haag, Surfact Co.

C. W. Kimball, Foster D. Snell, Inc., and Clarence L. Weirich, C. B. Dolge Co. Edward J. McKernan, E. J. McKernan Co.; Walter Zachritz, James Varley & Sons, and Carl Goldschrafe, Fleuroma, Inc.

Bengt Jutvik, Sveriges Oliekonsumenters Riksforbund (Stockholm, Sweden), and I. Y. Straus, Dura Commodities Corp. A. R. Schuster, and Richard J. Roach, Jr., Shanco Plastics and Chemicals, Inc.

the filling operation is complete. How this has been accomplished for a small, limited production, filling line was described by the author and with slides.

According to Mr. Stearns, the sterilization of the product, in this case a highly refined and specially milled grade of "Achromycin," is the "simplest" part of the whole procedure. The powder is sterilized with ethylene oxide and aseptically filled into one kilogram bottles. The method used to sterilize the aerosol valves is similar to that used with the "Achromycin." The valves are placed in stainless steel boxes, covered with kraft paper and placed in a special chamber built for ethylene oxide sterilization. The valves remain in the chamber for 16 hours maintained at 25 psig. The boxes are removed from the oven and placed in a sterile air lock under ultra violet light for 8 hours prior to use. Samples of the valves are taken prior to the filling and tested for sterility.

Containers in their original cartons are placed in a 110° C. oven for 10 hours. Prior to filling,

any lint or foreign material in the can is removed by a special air-vacuum system which utilizes sterile air. The containers are then tested to insure sterility.

Propellant is sterilized during the run by passing it through a special bactericidal filter which is installed in the line between propellant tank and cooling coils. A 32 mm. bacterial filter is used which is changed every 8,000-10,000 cans. All lines and coils after the filter are removable and can be steam sterilized.

Sterilization of facilities used during the filling operation gets under way just before or during sterilization of components. The filling room (15 by 30 feet) when in sterile condition can be reached only through a special dressing-room-air lock. The room itself is always kept under positive pressure by a special air conditioning system. Prior to use, the complete room, including all permanent equipment, is thoroughly washed with a solution of benzalkonium chloride and all ultra-violet lights are turned on 10-12 hours prior to use. All removable parts, equipment and tools are steam sterilized and placed in the special ultra-violet equipped pass-through before entering the filling room. Plate counts are taken periodically during the run to insure that sterility is not broken. Once the room is in a sterile condition no one is allowed to enter until the proper procedure for entering a sterile area is complete. This means going through the special positive pressure air lock, and donning sterile gowns, face masks, caps, gloves, goggles and foot wear.

Containers, valves, product go through pass-thru into the sterile room. Containers are placed in special section of sterile hood just adjacent to the small unscrambler. Here cans are subjected to final air-vacuum cleaning before filling. Cans are then placed on unscrambler and are picked up by conveyor belt of "Accofil" machine. During filling, each operation is separated from the next by a partition. This reduces air circulation and possibility of contamination. Conveyor carries containers first under propellant nozzle where correct charge of sterile-filtered propellant is loaded in can. From there containers move under measuring wheel where an accurately measured dose of powder is introduced; finally, the valve is inserted and crimped in place. After crimping, the containers are manually transferred to another small conveyor which carries them past a check weighing station, where periodic weight checks are made. Containers then leave sterile and are tested in conventional water bath and then rinsed in hot alcohol. Cover caps are put on and the cans are bulk packed.

Contract Filler's Role

". . . The filler is ready and willing to act as an extra arm (for) the pharmaceutical industry," A. P. Mason and J. W. Hart declared in their paper, "The Filler's Role in Pharmaceutical Aerosols." Mr. Mason is director of the aerosol laboratory of John C. Stalfort & Sons, Inc., Baltimore, while Mr. Hart is director of new products for Stalfort. What the filler is saying in effect, Mr. Hart said, is "we have experience in aerosols, we have equipment, we have limited knowledge of pharmaceuticals, we would like the opportunity to work with you. If a product is considered, we will help you develop it or perhaps develop it completely for you. We can produce this product as you are accustomed and control it according to your specifications. If you desire to change your package, you need not worry about production facilities, for that is our responsibility."

"One very important aspect of the filler's role in pharmaceutical filling is that of economies," Mr. Hart pointed out. He described the contract filler's plant as a "ready-made testing ground, (where) without any expense for equipment, new production personnel and storage area, the pharmaceutical company can market his aerosol. If he desires to change his propellant system, container or complete formula, he doesn't have to think of new equipment or facilities. The filler's versatility is waiting for his newest idea. We feel that this aspect is most important and this point is often used in soliciting business from pharmaceutical companies," Mr. Hart concluded.

"Aerosol Inhalation Therapy" medicinals administered by inhalation have many advantages compared with other routes of administration, according to Dr. John J. Sciarra, College of Pharmacy, St. John's University, Jamaica, N. Y. Some of the advantages include:

a.) Medicinals formerly given as an injection can be given by inhalation, thereby making it more convenient for self medication by the patient rather than by medically trained personnel.

b.) Response to drugs when administered by inhalation is prompt; faster in onset of activity, as compared with drugs given orally, and with most drugs approaches intravenous therapy in rapidity of action.

c.) Since drugs are absorbed directly into the blood stream via the lungs, there is no decomposition or loss of drug by the gastro-intestinal tract, as compared with losses and decomposition of the same drug when given orally.

d.) The dangers of giving medicinals by injection (trauma, embolism, sterile abcesses, etc.) are overcome since inhalation therapy would replace an injectable product in most cases.

e.) The use of medicinals by inhalation does away with the necessity for elaborate sterile preparations which are necessary for parenteral administration.

"With the introduction of liquefied gas aerosols thought was given to utilization of 'aerosol' principles for application of medicinal agents by inhalation. Several advantages over the conventional type nebulizers became

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immediately apparent. The medicinal agent could be mixed with propellant, thereby forming a self-powered unit capable of producing a spray or mist of the desired particle size. Since the passage was sealed there would be no danger of contamination or decomposition of the medication. If the medication was sterilized and packaged under aseptic conditions, then sterility would be maintained throughout the life of the product. Through use of a metered valve, the dosage could be controlled so that there would be no danger of either under—or over medication. Finally, the package was of such design as to make it easy and convenient for the patient to use.

"There are several ways in which a medicinal can be formulated with a liquefied gas to produce an aerosol. If the medicinal is soluble directly in the propellant a clear solution is produced. When this solution is dispensed from the container the propellant will vaporize, leaving behind a fine dispersion of the medicinal either as a liquid or solid particle depending upon its physical characteristics. Proper choice of propellant, valve and actuator will produce the proper sized particles. However, most medicinals are not soluble directly in the propellant and may be brought into solution by use of a co-solvent. When one considers the number of solvents which are miscible with the propellants and yet are safe to use internally, the problem becomes apparent. There are very few solvents which fall into this category. Ethyl alcohol has been used in a concentration of about 30% as a cosolvent for some medicinal aerosols. The usual advantages and disadvantages of ethyl alcohol are present. Some other solvents which may be useful but have not been fully tested to date are as follows: polyethylene glycol, and hexylene glycol. The toxicity of these compounds must be considered not only when given orally but when given by inhalation as well. Unfortunately, very little, if any, work has been done to investigate this phase of aerosol formulation.

"Water is a good solvent for many medicinals, but unfortunately water is not miscible to any great extent with propellants. However, it may be possible to formulate a three-phase aerosol using suitable baffles to produce desired particle size. Generally, a three-phase aerosol produces 'wet' or 'large' size particles, which must be further subdivided before they can be used for inhalation therapy. This type of a system would overcome many of the problems dealing with the toxicity of the co-solvent and the propellant.

"For those medicinals which are insoluble, or can be made insoluble, in the propellant, a dispersed system can be used. The powder must be finely subdivided and dispersed throughout the propellant. Suitable dispersing agents are used for this purpose and help to keep the particles in suspension. When the contents are dispensed, the propellant vaporizes leaving behind the finely subdivided powder which can then be inhaled. This system overcomes the disadvantages of using ethyl alcohol or other co-solvents in the formulation but presents the added problem of keeping the suspended particles in dispersion so as to give uniform dosage. This can generally be accomplished by shaking the container prior to use."

Pressure packaged pharmaceuticals are "standing at the point where sales can either continue at their present relatively leisurely growth rate, or they can be helped up to tremendous heights." This opinion was voiced in a paper by Henry Holloway, III, a market analyst of General Chemical Division, Allied Chemical Corp., New York. In his paper, "Market Potential for Pharmaceutical Aerosols," Mr. Holloway pointed out that 1959 sales were $20-25 million, "only about 13 per cent of its ultimate potential among proprietary topical drugs and pharmaceuticals." It will be another three or four years before aerosols "capture even 50 per cent of their ultimate potential, which will be close to $200 million by that time," Mr. Holloway declared.

To help reach the heights predicted for pharmaceutical aerosols, "if proper promotion campaigns are undertaken," pharmaceutical aerosol sales "could reach 53 million this year and $85 million in 1961," Mr. Holloway stated. He added, "If we remember that sales of all pharmaceutical products rose about 75 per cent in the past five years, a similar increase in the next 10 years would put today's $450 million quasi potential at about $800." Sales of aerosol pharamceuticals of $200 million or more annually "within the next five to 10 years is easily possible with adequate marketing efforts."

General Session

CHEMICAL Specialties Manufacturers Assn. – past, present and future, was discussed by George W. Fiero of Esso Standard Division of Humble Oil & Refining Co. at the general session, May 18. After tracing the early years of the association and its growth, the CSMA president discussed the role of the organization in the future. "The past," he said, "has demonstrated the importance of a united front in dealing with the many problems which confront us. Many authorities believe that the coming decade will be a new era—the jet or space age. Experience has shown us that the upsurge in necessity for unified scientific and legal action and the need to be completely and promptly informed will be even greater than in the past. In order to keep

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up with the times, CSMA will grow and develop with the needs of the times and will be even more important to you in the years ahead."

In his report as CSMA secretary, A. A. Mulliken revealed that Harry E. Peterson of Peterson Filling and Packaging Co., Danville, Ill., is to present a paper on aerosols, June 9, during a meeting of the Bureau of Weights and Measures in Washington, D. C. Mr. Peterson will be introduced by Robert L. Ackerly of the CSMA association counsel's office.

Mr. Mulliken announced in his report that Eugene E. Wilson, formerly with the Federal Bureau of Investigation, had joined CSMA as administrative assistant last Feb.

Robert L. Ackerly of Cummings, Sellers, Reeves and Conner, Washington, D. C., counsel for CSMA gave the report of the association counsel for John D. Conner. In his report, Mr. Ackerly called attention to a ruling of the Court of Appeals of Maryland in a case involving an aerosol spot remover made by Fuller Brush Co., Hartford, Conn. The Maryland Court reversed a ruling of a lower court and the case was remanded for a new trial. Fuller was sued by Richard L. Twombley who claimed that he inhaled the fumes of the aerosol spot remover which contained tetrachloroethylene (perchloroethylene) and as a result became ill of hepatitis. The court said that in its usual state tetrachloroethylene presents relatively little danger, whereas in the form of a mist if inhaled, according to Dr. von Dellinger, is much more dangerous. "Since its possible toxic effects were known," the court stated, "we think the defendant (Fuller Brush Co.) either was chargeable with notice of its possibly much more dangerous character when used in a spray, or was at least under a duty to make adequate tests before putting it on sale to the public."

Mr. Ackerly also pointed out that the states of Rhode Island, Maine and Kentucky have passed brake fluid laws, and that such a law is pending in Massachusetts. Also pending in that state, he reported, is a new insecticide law.

George W. Fiero, CSMA president, receives gold-plated aerosol can from Roger F. Hepenstal, president of the Can Manufacturers Institute, at post-luncheon ceremonies during CSMA meeting in Chicago on May 18. Award was presented "on occasion of the sesquicentennial of the metal can, and in recognition of the contribution by the chemical specialties industry," the aerosol being symbolic of one of the newer and faster-growing uses of metal containers.

Questions pertaining to "Food Additives and the FDA" were discussed and answered in an address by J. Kenneth Kirk, Assistant to the Commissioner, Food and Drug Administration, U. S. Department of Health, Education, and Welfare. The speaker clarified the distinction between food additives and accidental food additives, such as an insecticide that was not properly applied. Although this does not come within the definition and coverage of the newly enacted Food Additives Amendment, it would, of course, be dealt with as an adulterant. Mr. Kirk also explained the act as it affects insecticides which are used directly in

J. Kenneth Kirk, Assistant to the Commissioner, Food and Drug Administration, U. S. Department of Health, Education, and Welfare, discussing the recently effective Food Additives Amendment.

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Shanco Number	Melting Point	Acid Number	Penetration	Color
W-1130	212-215°F	10-12	1-2.5	5-6
W-1122	211-215°F	14-16	1-3	5-6
W-1119	209-213°F	18-22	2-4	5-6
W-1120	208 212°F	24-26	3-5	5-6
W-1123	205-209°F	32-34	4-6	6-7

Shanco waxes act as mutual solvents in paste waxes. They are used in emulsions in paper and textiles, as well as floor, furniture, and automotive polishes. They are also useful for blending with Polyethylene resins to give greater uniformity to the emulsions and increased hardness to the dry film.

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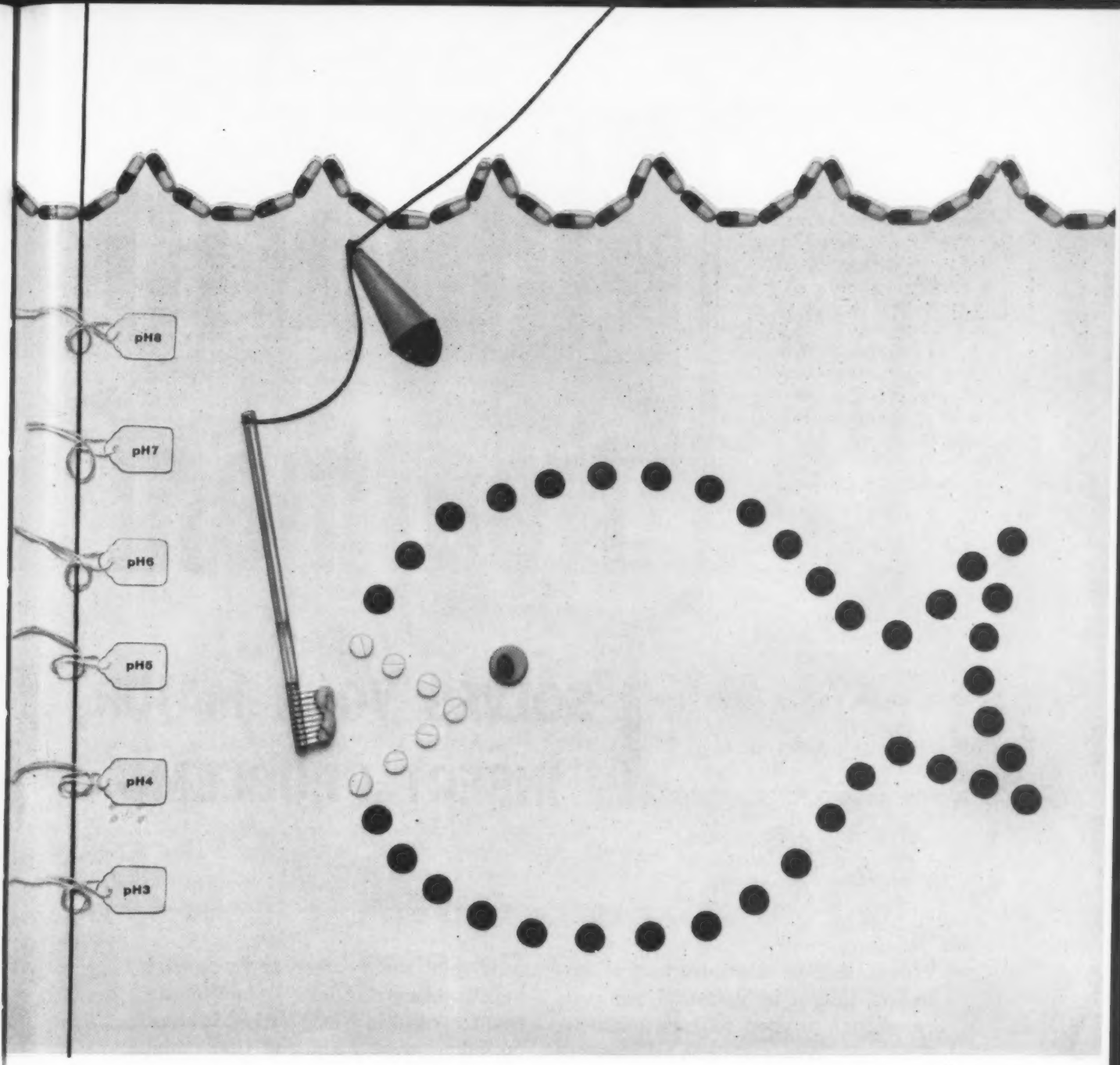

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foods, such as grain fumigants, as contrasted with an insecticide painted on a base board. He also explained "prior sanction and the GRAS ("Generally Recognized as Safe") lists. The full text of Mr. Kirk's paper will be published in a coming issue of *Soap & Chemical Specialties.*

The final feature of the general session was a presentation, "The Creative Challenges of the '60's," by G. Herbert True, South Bend, Ind.

Can Presentation

An inscribed, gold-plated aerosol can was presented to George W. Fiero, CSMA president, at the group luncheon May 18, in appreciation of the trade association's efforts on behalf ". . . of the newest and fastest growing uses of metal cans." Roger F. Hepenstal, treasurer of American Can Co., New York, and 1960 president of the Can Manufacturers Institute, made the presentation. Aerosol cans, Mr. Hepenstal observed, are the result of ". . . the fertile imagination of the men in the chemical specialties industry . . . (who) caused a resurgence of glamour in the can manufacturing industry, which is 150 years old this year."

CSMA second vice-president, Charles E. Allderdice, presides at luncheon.

The aerosol, Mr. Hepenstal noted, was greeted with "unprecedented" public acceptance due to the research and development of chemical specialties manufacturers who transformed the bulky single-purpose bug bomb of World War II into the light, modern "latter-day miracle" which today dispenses over 200 different products.

The gold-plated aerosol can presented to CSMA is intended, according to the CMI president, ". . . not simply as a symbol of past achievement but as a symbol of the golden future that awaits our mutual efforts."

Aerosol Division II

The aerosol market continues to be dynamic, with 1959 production totalling 498,287,943 non-food aerosol and pressurized packages, according to reports by 115 fillers. This compares with a total of 341,383,496 units reported by 95 loaders in 1958. The 1959 figure includes 20,176,245 units produced by eight Canadian companies, whose reports have been collated into the first separate Canadian survey.

Based on information relating to container and valve production and on the number of non-reporting fillers, the actually reported total was adjusted to 575 million units, a 22 per cent increase over the 1958 figure.

The accompanying table shows actually reported totals. According to the Aerosol Products Survey Committee these totals should be adjusted as follows: Insect sprays – 81 million; room deodorants – 70 million; shave cream – 77.6 million; hair spray – 100 million; coatings – 56.5 million; dental cream – 15.2 million; and colognes – 39 million units.

Estimated total retail value is three quarters of a billion dollars, according to H. H. Husted of Union Carbide Chemicals Co., who presented the 1959 aerosol and pressure products survey in his capacity as chairman of the Aerosol Division's Product Survey Committee. This estimated value was arrived at by adjusting upward the previously used average unit price of $1.00. Since comparative newcomers, such as colognes, pharmaceuticals and coatings retail at considerably higher prices, the previously used yardstick was considered unrealistic, Mr. Husted pointed out.

Hair sprays continued to lead pressurized packages with 79.7 million units sold in 1959 (92.6 million in 1958). Shave lather climbed to second place with 72.6 million (45.3 million in 1958) packages. Third place was taken by coatings and finishes with 52.5 million units (30.1 million in 1958). Although increased in sales volume to 59.7 million units from 49.8 million in 1958, room deodorants have slipped from second place to fourth place on the list. Rapid sales growth is shown by colognes and perfumes: 34 million units in 1959, compared with 13.6 million in 1958, and by glass cleaners which rose from 3.7 million to 18.5 million packages.

Waxes and polishes, household and automotive, are shown separately for the first time. Sales in that group amounted to 11.8 million packages. The actual figure is higher, according to Mr. Husted, because the smaller units had to be reported with other household products for reasons of non-disclosure.

Sales of pressure packaged space insecticides grew from 22.3 million units in 1958 to 38.8 million in 1959; shoe and leather dressings from 5.4 million packages to 13.7 million.

The six ounce (or smaller) unit continues to be the most popular size, accounting for 187 million units of the 498.3 million produced; six to 12 ounce sizes totalled 155.1 million units; and 131

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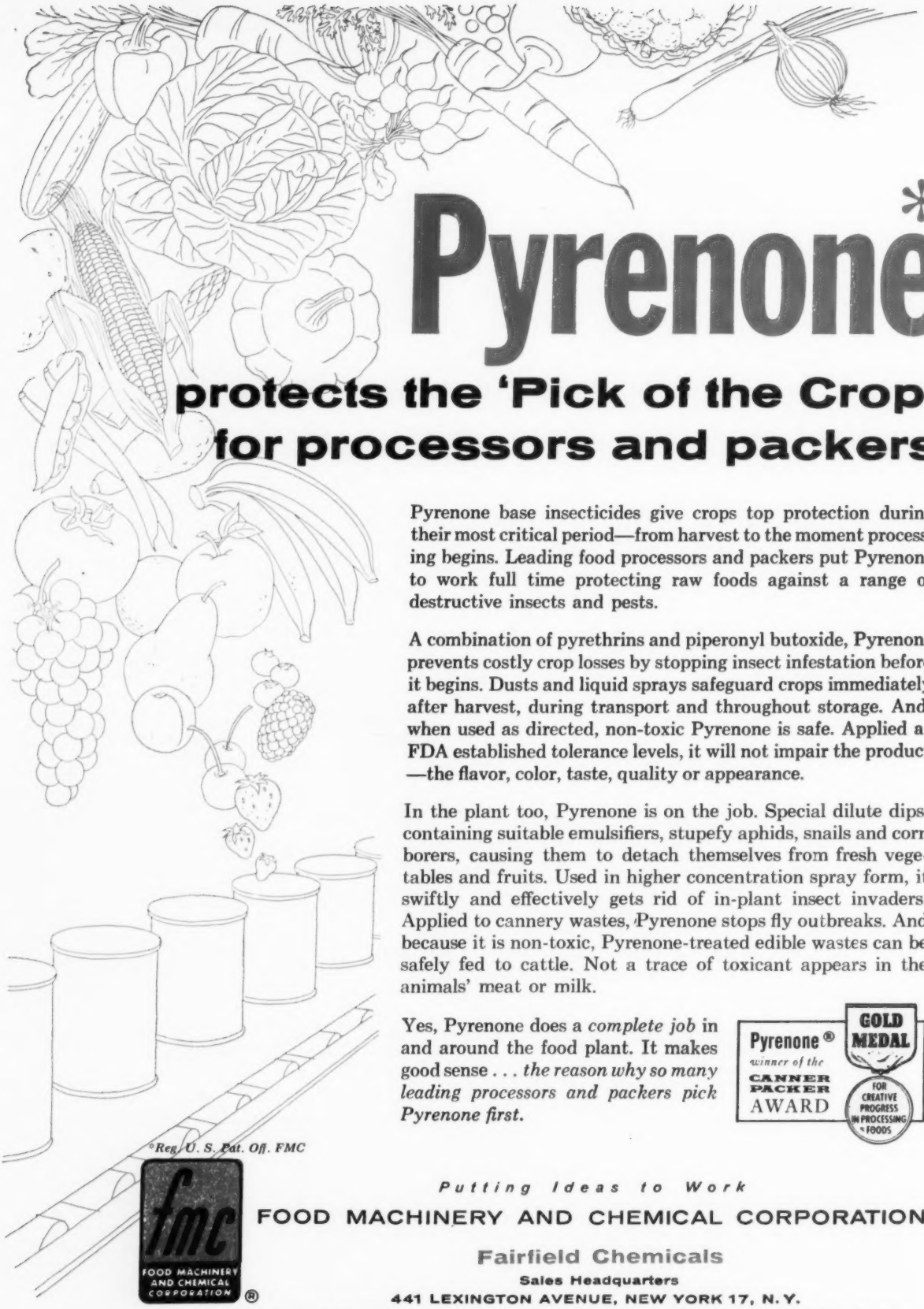
CSMA Survey of Non-Food Aerosol and Pressurized Products Filled by 115 Companies in 1959

Product	Glass Containers All Sizes	Number of Units Filled Metal Containers 16-Ounces But Over 12	12-Ounce But Over 6	6-Ounce And Less	Total[1,2]
Insect Sprays					
1. Space Insecticides	-o-	16,621,048	20,741,202	1,388,398	38,750,648
2. Residual Insecticides all Types (such as roach and ant sprays, insect repellents, plants, etc.)	-o-	7,356,331	10,618,053	3,531,698	21,506,082
3. Mothproofers (includes all fabric pests)	-o-	1,636,750	3,955,574	61,720	5,654,044
Coatings and (or) Finishes					
4. All Types (pigmented, metallic, clear plastic, protective and decorative, etc.)	-o-	36,570,326	9,636,131	6,349,379	52,555,836
Household Products					
5. Room Deodorants	†	4,598,583	19,372,672	35,752,334	59,723,589
6. Snow all Types	-o-	4,197,129	4,040,643	721,409	8,959,181
7. Glass Cleaners	†	16,919,284	1,350,040	200,888	18,470,212
8. Shoe or Leather Dressings	†	1,955,991	2,528,975	9,254,103	13,739,069
9. Waxes and Polishes (household and automotive	†	7,209,699	*	4,633,739	11,843,438
10. Other Household Products all Types (such as metal, oven, rug and upholstery cleaners; water repellents, etc.)	†	4,292,153	19,895,384	410,372	24,597,909
Personal Products					
11. Shaving Lather	-o-	306,138	20,352,663	51,852,158	72,610,959
12. Hair Sprays and Dressings	†	22,360,817	26,128,270	31,198,387	79,687,474
13. Dental Cream	-o-	††	††	11,241,253	11,241,253
14. Medicinals and Pharmaceuticals (such as fungicides, burn treatments, topical antiseptics, oral medicinals, anesthetics, antibiotics, etc.)	3,329,752	††	426,829	6,279,731	10,036,312
15. Colognes and Perfumes,					
(a) Over one ounce	18,586,393	xxxxx	xxxxx	9,798,833	28,385,226
(b) One ounce and under	2,211,201	xxxxx	xxxxx	3,481,034	5,692,235
16. Other Personal Products (such as shampoos, sun tan preparations, personal deodorants, sachets, hand lotions, powders, depilatories, etc.)	666,622	542,704	3,239,335	7,792,977	12,241,638
Miscellaneous					
17. Veterinarian and Pet Products (such as shampoos, deodorants and insecticides, etc.)	-o-	286,749	2,727,994	1,098,282	4,113,025
18. Miscellaneous Products (such as mildew, fire extinguishers, automotive (other than reported in categories 4 and 9), industrial lubricants and any others.)	-o-	6,167,350	10,062,705	1,783,457	18,013,512
† Total of Glass Categories which are too revealing to be released	466,031	—	—	—	466,031
Totals[1,2]	**25,259,999**	**131,021,052**	**155,076,470**	**186,930,422**	**498,287,943**

1) Totals above include Canadian production amounting to 20,176,245.
2) Total estimated by aerosol products survey committee to reflect non reporting companies is 575 million units.
† Too revealing to be released. Included in total shown on following page.
* Too revealing to be released. Included in 10, Other Household Products all Types.
†† Too revealing to be released. Included in 16, Other Personal Products.

million were large 12 to 16 ounce packages. More than 25 million aerosols were packaged in glass containers.

Seven identified container manufacturers plus an unknown



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number of glass companies reported production and sales of aerosol containers for non-food products totaling 583,933,378 units. Aerosol valves produced and sold numbered 603,988,202, according to reports by nine companies. In interpreting the estimated or projected production figure Mr. Husted pointed to the close agreement between figures given for valves and containers.

The first survey of non-food aerosols loaded by eight Canadian fillers in their own plants follows herewith:

	Number of units filled
Metal containers	
16 ounce but over 12	2,912,389
12 ounce but over 6	8,365,551
6 ounce and less	7,586,725
Total	18,864,665
Glass containers, all sizes	1,311,580
Total glass and metal	20,176,245

The first paper of the second session of the Aerosol Division, was "Comprehensive Analysis of Aerosol Systems Composed of Propane, Propellant 11, Odorless Neutral Spirits," by John Bease, Franklin D. Haase and Montford A. Johnsen, Peterson Filling and Packaging Co., Danville, Ill. A comprehensive analysis of aerosol systems based on propane, propellant 11 and odorless mineral spirits was reported on. These hydrocarbons qualify as propellants: propane, isobutane, and normal butane. Propane, say the authors, is the "most intriguing." It is readily available in low-odor grades. Because of its high pressure, greater formulation latitudes are possible with propane, and lower cost products can be obtained as a result.

Iso-butane finds use in lower pressure aerosols; particularly where a finer particle size is desired. It is generally used in combination with other propellants. Normal butane finds very little use in non-aqueous formulations, being restricted to very low pressure types.

The three component system discussed in this paper is expected to form the basis of propane-based insecticides, room deodorants and similar aerosol products.

According to the report, tests show that current I.C.C. regulations limit the use of propane to 20% or less, depending upon the other components. Any combination of iso-butane is permissible for shipping purposes, as far as pressure is concerned.

Propane provides a complete spectrum of useful particle sizes within the low-pressure range, it is reported in the paper. Further, particle size is extremely dependent upon the concentration of propane. Relatively low concentrations of propane provide distribution characteristic of very high concentrations of halocrabon propellants.

Container Capacity

In the section dealing with densities, the paper points out that because of the extremely low density of hydrocarbons much thought must be given to container capacity. In many cases containers are no longer able to hold the minimum fills recommended by the Commercial Practices Committee, Aerosol Division, CSMA, and still conform with the recommendation of the Aerosol Administrative Committee that "an aerosol container is considered to have a safe fill if there is 7½% headspace within the container when the contents are heated to 130°F."

Tests conducted in connection with distillation studies showed that with a slowly leaking aerosol can the vapor released from such units contains from 80 to 90 per cent propane, with the remainder mainly "F-11." The vapors of such leaking cans remains in the flammable category until the can comes to equilibrium at room temperatures, or almost so; depending upon composition. At this point the liquid contains only 2 to 3 per cent residual propane.

In discussing flammability, the report states that "by a comparison of all the flammability tests, an area may be obtained where compositions are non-flammable by any method, keeping the delivery rate and other restrictions in mind. Unfortunately, parts of this area do not lend themselves to the formulation of acceptable aerosol products.

In the paper, "The Mechanism of the Reaction of Trichloromonofluoromethane and Ethyl Alcohol" by Paul A. Sanders, Freon Products Laboratory, E. I. du Pont de Nemours & Co., Wilmington Del., stated that "Storage stability of aerosol products is a problem of paramount importance to the aerosol loaders. Although the large variety of aerosol products now marketed generally have acceptable shelf life, some have shown inconsistencies which have never been satisfactorily explained. Many otherwise successful aerosol formulations have never progressed beyond the laboratory because of the corrosive nature of the products.

"In water based products packaged in metal containers, trichloromonofluoromethane is generally considered unsuitable for use since some metals may catalyze the hydrolysis of trichloromonofluoromethane with the liberation of acid. As a result it has been considered advisable to keep the moisture content as low as possible in nonaqueous products formulated with ethyl alcohol and trichloromonofluoromethane in order to minimize hydrolysis. It is now known that the major cause for development of acidity in alcoholic aerosol systems is not hydrolysis of the trichloromonofluoromethane but the reaction of this compound with ethyl alcohol. Mr. Sanders concluded that the reaction between trichloromonofluoromethane and ethyl alcohol is a typical free radical reaction. In the absence of free radical initiators, trichloromonofluoromethane and ethyl alcohol do not react.

"In order to study the reaction, it was necessary to accelerate the reaction sufficiently so that the reaction products could be quantitatively identified. In the present experiments, benzoyl peroxide was used as the free radical initiator. The reaction was carried out for

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96 hours at 55° C. in glass. The following compounds were identified as products of the reaction: acetaldehyde, acetal, dichloromonofluoromethane, ethyl chloride, hydrogen chloride, and sym. tetrachlorodifluoroethane.

Aerosol Powders

In discussing the "Magic Market of Aerosol Powders," E. E. Husted, Union Carbide Chemicals Co., New York, declared the total market for such products "could be in excess of one billion units" annually. The existing (1960) market for four types of products: cosmetic, pharmaceutical, household cleaners and insecticides is approximately 868,451,000 units, worth $249,615,000, according to Mr. Husted. Of these four product categories, by far and away the largest is the household scouring powders, with a volume of 696,000,000 units. Baby powder, with 48,700,000 units, ranks second, and women's talcum and body powder and moth control agents are third and fourth largest, respectively, with 37,100,000 and 30,200,000 units.

Figures of "potential powder markets" for 1960 cited by Mr. Husted included dentifrice with 385,807,000 units, of which only 3% is now in powders; deodorants, 63,400,000 units, of which only .7% is in the form of powders, and toilet bowl cleaners, with 29,000,000 units, none of which is in powders.

Automotive Division II

AUTOMOTIVE specialties are expanding. This was evident from the report presented by J. M. Russ of Union Carbide Chemical Co. Mr. Russ is chairman of the Automotive Division's products committee, which is responsible for the division's annual products surveys.

Manufacturers' antifreeze sales rose in 1959 to 121,470,427 gallons, up 10 per cent from 110,216,357 gallons reported in 1958. About 89.1 per cent (108,299,845 gallons) of the 1959 total was accounted for by the non-volatile primary ethylene glycol type antifreeze. Volatile methanol type products accounted for the remaining 10.9 per cent.

About 30 per cent of all antifreeze sold by manufacturers was shipped in bulk. A wider use of gallon cans was noted in 1959, in keeping with a general trend toward larger packages prevailing in the chemical specialties industries. Number of quart cans sold, declined slightly in the face of the overall sales increase.

A 20 per cent increase was reported in brake fluids compounded by manufacturers in 1959 over the total in 1958. Production amounted to 11,798,071 gallons in 1959, compared with 9,834,811 gallons in 1958, according to combined reports by 28 participating manufacturers. Only about four per cent of the total output did not meet SAE or government specifications. Over 5.4 million gallons

CSMA Brake Fluid Survey 1959-1958
(showing fluid actually compounded)

	Number of gallons 1959	1958
A. Standard brand and private brand compounded which meet SAE Specifications:		
1. Heavy Duty 70 R3	3,754,387	
2. Heavy Duty 70 R1	5,402,311	7,778,398
3. Former Moderate Duty 70 R2	1,154,252	1,285,363
B. Gallons compounded which meet specific Government Specifications if not falling into Heavy Duty Category under (A) above	916,985	
C. Standard brand and private brand compounded which do not meet either the SAE Specifications (A) above or the Government Specifications (B) above	570,136	771,066
Total	11,798,071	9,834,817

CSMA Survey of Automobile Wax and Polish Production 1959-1958
(covering house brands and private brands production reported by 27 companies)

	Number of individual packages contents of which are: 20 oz. and less		Over 20 oz. and less than 5 gal.		Bulk 5 gal. and over in gals.	
	1959	1958	1959	1958	1959	1958
A. Liquid Form						
1. Pre-wax cleaner	2,952,265	2,509,971	100,959	91,963	4,890	†
2. Polish and cleaner—No wax content	5,573,106	6,136,908	284,505	221,664	1,899	†
3. Combination cleaner and wax	10,452,718	2,362,393	26,746	30,788	†	†
4. Liquid wax for automobiles	1,034,409	386,896	†	†	†	†
5. Chromium Cleaner	2,411,507	2,590,199	11,082	2,850	†	†
B. Paste Form			Bulk Paste Form in Lbs.			
1. Pre-wax cleaner	1,692,146	1,230,363	102,983	†	†	†
2. Automobile wax	2,762,104	2,186,928	†	†	†	†
3. Combination cleaner and wax	8,769,814	6,712,564	†	†	†	†
C. Aerosols—All Sizes	†	—	—	—	—	—

† Too revealing to be released.

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Butonate

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- *Residual action against insects even in light concentrations*
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- *Inoffensive odor*
- *Soluble in most organic solvents*
- *Compatible with nonalkaline insecticides and fungicides*

Butonate is a cholinesterase inhibitor. Laboratory tests have proven its effectiveness against household and certain agricultural pests. It may be formulated as an oil spray, an emulsion, wettable powder, or dust.

One formulation, Prentox Pybuton Concentrate, contains 16% by weight butonate, 1.0% piperonyl butoxide and 0.4% pyrethins, combining the residual action of butonate with fast knock-down action while maintaining low toxicity. Butonate is also available as a 25% emulsifiable concentrate, as a 20% oil soluble concentrate, and in a technical formulation containing 95% by weight butonate.

Chemically, butonate is an organic phosphate—0, 0-dimethyl 2, 2, 2-Trichloro-1-n-butyryloxyethyl phosphonate. It is a colorless, somewhat oily liquid, stable in neutral or acidic aqueous solutions, having a (mild) ester odor. Additional information, test data and samples for testing may be secured from us at any of the addresses shown below.

Butonate's manufacture is licensed by the Wisconsin Alumni Research Foundation under U. S. Patent No. 2927881.

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CSMA Survey of Automotive Cooling System Chemicals Production (exclusive of antifreeze) Comparison of 1959, 1958, and 1957.

	1—Treatment Package (Consumer Size) Number of Individual Consumer Size Packages		
	1959	1958	1957
A—Cooling System Cleaners			
1. Dry form, two phase type cleaner and neutralizer	1,426,279	1,300,901	1,399,163
2. Dry form, one phase	468,932	613,040	441,485
3. Liquid form	3,549,427	2,710,047	2,203,305
Total	5,444,638	4,623,988	4,043,953
B—Cooling System Sealers			
1. Liquid form, except block sealers	11,325,641	9,753,311	9,390,758
2. Dry form, except block sealers	3,753,849	1,154,396	998,761
3. Heavy duty & block sealers	1,872,136	1,523,156	1,292,640
Total	16,951,626	12,430,863	11,683,159
C—Cooling System Inhibitors			
1. Dry form	*	442,240	*
2. Liquid form	(996,992	*	464,109
D—Combination Water Pump Lubricant & Rust Inhibitor	10,160,363	9,161,030	7,365,665
E—Others	*	*	*

* Too revealing to be released.

CSMA Survey of Manufacturers Antifreeze Sales 1959-1958

	Gallons	
	1959	1958
Primary ethylene glycol type	108,299,845	94,649,358
Primary Methanol Type	13,170,582	15,566,999
Total	121,470,427	110,216,357

comply with SAE specification for heavy duty 70 R1, 3.7 million gallons with SAE 70 R3, reflecting the ever increasing demands placed on brake fluids by advances in automotive engineering.

More than 33.6 million single treatment consumer size packages of cooling system chemicals (excluding antifreeze) were produced in 1959, about 10 million more than in 1958, according to information supplied by 26 manufacturers.

Mr. Russ presented the first CSMA survey of automobile wax and polish production, covering house brands and private brands. Figures were collated from reports by 27 manufacturers. More than 35 million packages were produced, of which more than 90 per cent were in the 20-ounce and smaller category. Cleaner/wax combinations accounted for more than half the total market both in liquid and paste form products.

A symposium on publicity as an aid in expanding the market for automotive specialties occupied the major portion of the second session of the Automotive Division. The first of three speakers, J. Walter Goetz of Union Carbide Chemicals Co., New York, stated the problem facing the marketer of private brand automotive specialties in trying to expand his market:

"In a limited, multi-brand market, most individual shares are too small to afford the cost of extensive national advertising. . . . Based on our experience in cooling system maintenance, we believe that (getting garage service men to sell preventive maintenance and getting across to consumers the need for such maintenance, and thus expanding the market) both of these can be done through a publicity program to tie in with current forms of advertising."

Mr Goetz mentioned "National Cooling System Maintenance Week," which his company sponsored, beginning in 1958, as an example of what automotive chemical specialties makers might do to promote their products.

The details and mechanics of operation of National Cooling System Maintenance Week were discussed by the second speaker of the panel, Paul B. Zucker, Ruder & Finn, Inc., New York public relations firm. In the three years the program has been under way, the cooperation of elected officials and the press in this effort to stress the need for preparing for summer driving has increased markedly, Mr. Zucker said. The core of the program, he explained, is in obtaining official endorsement of the "week" in the form of proclamations from governors and mayors of major market areas in the U. S.

The third speaker, J. M. Hogrefe of Union Carbide Chemicals Co., New York, suggested that the Automotive Division of CSMA be "considered a potential nucleus for publicity and promotion for automotive specialties."■

Insecticide Division—II

"ALTHOUGH there is no question that DDVP is a very toxic chemical, both for insects and man, it nevertheless possesses some excellent properties that are most desirable in insecticides," Dr. Ralph L. Tracy of Norda Essential Oil and Chemical Co., New York, declared. As the first speaker of the second session of the Insecticide Division, Dr. Tracy pointed out that unique insecticidal properties of DDVP have warranted its use since 1958 in fogs and sprays to control cigarette beetles and tobacco moths in tobacco warehouses and in mushroom culture for phorid flies.

He also stated that toxicological studies show that the haz-

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ard of DDVP is related to the weight of acute intake rather than to repeated exposures of sublethal doses or metabolic deviation of the chemical in the body. Anticholinesterase activity in humans is insignificant from exposures to the vapors produced by 2 mg DDVP/-ft^3. Vapors in the homes of 18 human volunteers from repeated doses of 0.5 mg DDVP/ft.^{3} did not produce anticholinesterase depressions of erythrocytes or plasma over a period of about two months.

There is evidence that DDVP is rapidly detoxicated by the liver of animals and is not stored in the body tissues, Dr. Tracy concluded.

"A growing portion of the public is becoming unduly fearful of the use of pest control chemicals," according to Jack Dressen of National Agricultural Chemicals Assn., Washington, D. C. The recent "cranberry episode" and an earlier one involving apples imported into England from the U. S. are contributing to this fear, Mr. Dressen indicated in his paper, "Weed Control and Public Reaction." "Adverse and unfounded criticisms of scientific research in our field and the wide dissemination of . . . misstatements are leaving their mark. There has been an increase in proposed restrictive legislation, but more important, more and more people are accepting these statements as fact and are tending to discredit the sound, scientific developments of the past few years," Mr. Dressen pointed out.

In discussing "Pesticide Formulation—A Carrier-Producer's Viewpoint," Garth Combs of Johns-Manville Research Center, Manville, N. J., declared that "the development of satisfactory pesticide formulations is a combination of science, art, and luck." The factors involved range from the biology of the pests and their hosts to the characteristics of available production equipment, Mr. Coombs added. By combining the carrier producer's knowledge of his products with the pesticide-producer's knowledge of desirable formulation performance, a cooperative effort can lead to good results, the speaker indicated. The formulation must be satisfactory from both the physical and biological aspects, he said. Typical steps to be used in developing formulations listed by Mr. Coombs are: 1. Determine desired product performance; 2. Establish the compatibility of the toxicant and the "inerts" under consideration; 3. Set up concentration limits for carriers and prepare a "blank" blend; 4. Decide on suitable surfactants and other additives; 5. Prepare and test best potential formulations; 6. Submit formulation for biological test; 7. Run large scale plant trials.

An experimental plan for keeping, spraying and collecting milk from cows treated with a "Lethane" comfort spray was discussed in a paper by Charles F. Gordon, John Barker, Linwood D. Haines and Arthur L. Wolfe of the research laboratories of Rohm and Haas Co., Philadelphia. A chemical method is described in the paper which was used to determine the presence of microgram quantities of thiocyanates in the milk samples. The limits of sensitivity for this method are 0.01 ppm "Lethane." Milk from cows sprayed with recommended maximum concentrations and rates, according to the paper, contained no "Lethane." Residues of 0.015 ppm of the insecticide appeared only when the spray formulation and usage rate was equivalent to four times the maximum recommended dosages and if the spray is applied directly to the animal's hide.■

Waxes and Floor Finishes Division—II

THE relationship between the molecules of carnauba wax and its performance properties were discussed by Lee M. Prince of Reichhold Chemicals, Inc., Elizabeth, N. J., in the opening paper of the second session of the Waxes and Floor Finishes Division. In his paper, "Carnauba Wax, Its Molecules and Performance," Mr. Prince presented evidence to explain the excellent solvent retention of the wax and its amorphous character on the basis of the disorder produced in the crystal latices by the hydroxyl group attached to the ester. In addition, a new electron micrograph technique is employed to correlate droplet dimensions with the Tyndall effect identified with carnauba wax emulsions.

Regular wax of flooring, whether it be vinyl tile, asphalt tile, rubber tile, vinyl printed sheet goods or linoleum, produces three to 16 times more gloss than the same material on which no wax was used. The difference in gloss and brightness of appearance becomes more pronounced with longer service on the floor.

This was one conclusion expressed in a laboratory report by Foster D. Snell, Inc., New York consulting chemists and engineers. Results of the report were presented in a paper by W. J. Hackett and Cyril S. Kimball of Snell. The study, sponsored by the Waxes and Floor Finishes Division of CSMA, was undertaken to find out whether new developments in the field of smooth floor coverings have made waxing unnecessary, as some makers claim. In addition to the finding that waxing enhances the beauty of all floor coverings by increasing initial gloss on the average of two to four times, the study also found that in service under traffic, all floor coverings maintained by regular waxing show a 300 to 400 per cent higher gloss than those on which no floor wax is used. Also, waxed floor

(*Turn to Page* 119)

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Carnation	Heliotrope	Millefleurs	Violet
Chypre	Honeysuckle	Muguet	Wistaria
Cologne	Jasmin	Narcisse	

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Mix one part increased popularity with one part lower costs—result: higher profits to you...from every product perfumed with an Orbis scent. Orbis skillfully blends uniform high quality with great economy...the ingredients of assured success. Choose your scents from an Orbis series...write (on your letterhead) for samples and for the complete Orbis catalog of fine essences.

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HUDDLE . . . Onyx top brass, left to right: Dr. Reginald L. Wakeman, vice-president and director of research; Dr. Peter Bouroff, assistant to president and plant manager; F. O. Robitschek, president; Irving Gaines, vice-president in charge of sales, and Matthew J. Kanes, secretary-treasurer.

One Year, Three Milestones

Onyx Chemical Corp., major supplier of surfactants, marks 50th year, puts stock up for public sale, changes name

THREE milestones are being marked this year by Onyx Chemical Corp., Jersey City, N. J.: the celebration of its 50th anniversary, its joining the ranks of publicly held corporations, and the adoption of a new name. Formerly known as Onyx Oil & Chemical Co., the firm is a major supplier of bulk surface active agents.

Onyx traces its beginnings back to 1910, when Victor H. Berman and Richard Von Oesen set up a small factory on the site of the present Jersey City plant to produce specialties for the textile industry. Mr. Von Oesen was in charge of manufacturing and Mr. Berman did the selling among silk mills in Paterson, N. J. Today, Onyx products are sold throughout the free world, and are produced by the latest chemical processing equipment. The 1920's witnessed a mushroom expansion of product lines. Added to a rapidly growing family of sulfonated oils were a host of other products derived from them – sulfonated oil esters, alkyl naphthalene sulfonates and sulfated fatty alcohols. These products were used in various operations of textile processing.

In order to utilize more fully the plant and scientific personnel, the company looked to other markets and in 1932 developed its first product for non-textile markets. Fatty alcohol sulfates and sulfated oils were sold in increasingly large volume through the 1930's. At that time the early original work began on the synthesis of quaternary ammonium salts as germicides. In addition, the line of alcohol sulfates was revised and expanded.

Shortly before World War II, encouraged by the acceptance of its products in the cosmetic and related industries, Onyx began to develop a much broader line of surfactants. Onyx' expanded research efforts also developed new water-repellents, cationic softeners and mildewcides.

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WAX	Melting Point °C	°F	Acid Value	Saponification Value	Unsaponifiable matter	Color
			ACID WAXES			
S	80- 83	176-182	140-155	160-180	7-10%	light yellowish
L	80- 83	176-182	125-145	150-170	7-10%	dark yellow
LP	81- 84	178-183	100-120	130-150	7-10%	yellowish
			ESTER WAXES			
E	78- 82	172-180	15- 20	145-165	7-10%	light yellowish
CR	82- 85	180-185	30- 35	110-125	12-16%	brown-black
KPS	80- 83	176-182	20- 30	135-150	12-14%	yellowish
KSS	78- 83	172-182	25- 35	120-135	21-24%	yellowish
BJ Unbleached	70- 73	158-163	17- 25	135-150	22-25%	light yellowish
BJ Bleached	70- 73	158-163	65- 85	155-170	21-23%	light yellowish
F	74- 77	165-170	6- 10	95-105	42-47%	light yellowish
KP	80- 83	176-182	20- 30	135-150	12-14%	brown
OP	102-106	215-223	10- 15	105-120	7-10%	beige
O	102-106	215-223	10- 15	105-120	7-10%	beige
OM	93- 98	199-209	17- 22	105-120	7-10%	beige
FL	95-100	203-212	30- 37	90-105	18-23%	light brown
PECIAL	96-100	205-212	13- 18	90-105	20-22%	brown-black
			OTHER WAXES			
H	81- 82	178-180	2- 9	170-185	5-10%	whitish
W	57- 60	134-140	0- 1	5- 25	85-90%	whitish,, transparent
V	48- 50	118-122	0-	0	100	off-white

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The company's present management headed by Fritz O. Robitschek took over the reins of the corporation in 1956, a year after the death of Victor H. Berman. Mr. Robitschek had been merchandising director of Colgate-Palmolive Co. Since that time, emphasis has been placed on the development and production of chemicals for a wider variety of industrial uses.

Onyx Chemical Corporation manufactures some 300 products, sold to over 2,000 customers, made up of manufacturing concerns in widely diversified industries. The distribution pattern combines a direct sales force and distributors. The sales force is headed by Irving Gaines, vice-president, and Philip E. MacLean, sales manager. Offices are maintained in Boston, Jersey City, Charlotte, N. C., Cleveland and Chicago.

Distributors serve customers in the deep South (Osco Chemical Co.), Rocky Mountain area (Wasatch Chemical Co.), the West Coast (E. S. Browning Co.), and Canada (Clough Chemical Co., Ltd.). In addition, Onyx is represented overseas by Occo International, and its agents throughout the world.

The recent addition of an IBM installation helps to speed-up processing of customer orders and invoices. It is also used for raw material and finished product inventory, and statistical sales analysis.

Plant and Facilities

In addition to the plant in Jersey City, Onyx has a plant in the Rossville section of Staten Island, N. Y. The Jersey City plant houses the main offices and laboratories. There is a wide variety of facilities in its 200,000 sq. ft., including 40 storage tanks, having an aggregate capacity of 320,000 gallons, 35 stainless steel or glass-lined kettles, three stainless steel rotary vacuum dryers, and numerous reactors and mixers. There is also an enclosed siding for railroad cars to help speed tankcar orders.

The Staten Island plant is located on a 15 acre tract on the Arthur Kill Canal. There is approximately 65,000 sq. ft. of manufacturing and warehouse space, with an administrative office and quality control laboratory. Facilities at the Staten Island plant include 40 storage tanks with a capacity of 95,000 gallons, 14 stainless steel kettles, seven glass-lined

..About F.O. Robitschek, Onyx President

A NATIVE of Stuttgart, Germany, Mr. Robitschek came to the United States in his late teens. He found his way to Ohio and his first job was as a mixer of fertilizer in a small Ohio garden supply house. Following his graduation from high school, Mr. Robitschek went to work as a laborer in a small chemical plant in Marietta, O., and enrolled as a chemistry major at Marietta College. Four years later he was a foreman at the plant, but determined to capitalize on his chemical training, he became a research assistant in the laboratory, even though the switch meant a cut in salary. When he left the company some years later, Mr. Robitschek was a director and vice-president in charge of production.

During World War II, Mr. Robitschek served on the War Production Board, Fats and Oils Branch, responsible for the allocation of vegetable and animal fats and oils. At the conclusion of the war he was inducted into the U.S. Army and was sent to Germany, where he aided in the preparation of a report on the German chemical industry. Following his separation from the armed forces, Mr. Robitschek joined Colgate-Palmolive Co., eventually becoming merchandising director. It was this post he gave up to join Onyx Oil and Chemical Co. as its president.

Other members of the Onyx management team include Dr. Reginald L. Wakeman, vice-president and director of research and development. Dr. Wakeman had been with Onyx prior to Mr. Robitschek's joining the firm. He left Onyx in 1951 to become technical director of Quaker Chemical Co., Conshohocken, Pa., after having been with Onyx for six years. Most recently he was in charge of new research for Packaging Corp. of America, Grand Rapids, Mich. Dr. Wakeman received his Ph.D. in organic chemistry from Massachusetts Institute of Technology. He also studied at the University of Paris and later at Eidgenossische Technische Hochschule, well-known technical school in Zurich, Switzerland.

Irving Gaines, a graduate chemist, who has been sales manager of the industrial division of Onyx, was tapped as sales manager of the firm's entire sales force. He is now a vice-president in charge of sales for Onyx.

Dr. Peter P. Bouroff joined Onyx as assistant to the president and plant manager in 1959. Prior to that he had been chemical divisions manager for E. F. Drew & Co., Boonton, N.J., and plant manager of American Alcolac Corp., Baltimore. He holds a Ph.D. in chemical engineering and chemistry from the Sorbonne.

Secretary and treasurer of Onyx is Matthew J. Kane. He was formerly with Price, Waterhouse & Co., New York accounting firm.

Onyx had sales of approximately $5,000,000 and net earnings of $210,000 in 1959. This year, Mr. Robitschek expects the sales figure to hit somewhere between $5,500,000 and $5,800,000, with a profit of $250,000. By 1963 sales should grow to $10,000,000 to $12,000,000, and earnings should be up to $500,000 to $840,000.

SOME PERFORMANCES HAVE NEVER BEEN EQUALLED—

STANDARD FOR SKYSCRAPERS—Reaching majestically 102 stories and 1,250 feet into the sky, the Empire State Building is the world's tallest. In addition, a 222-foot television antenna towers above the building. Revolving searchlights installed on the 90th floor can be seen 300 miles away. More than 1,000,000 people visit the observation floor annually.

Look at Pine Oil

Someday someone may build a taller building than the Empire State Building—but it hasn't been done yet. And someday someone may invent a better all-round ingredient for disinfectants and cleaning compounds than pine oil—but as yet pine oil remains the standard.

Pine oil, of course, adds much more than a pleasant scent to compounds. Its wetting properties, solvent action, bactericidal properties, and safety are well known.

Pine oil, which has been in short supply for many years, is now readily available due to increased productive capacity. Look to Hercules for all the pine oil you need.

And look, too, at Hercules® pine oil's performance as a high-powered solvent:

	Kauri-Butanol Value
Pine Oil	**500+**
Toluol	105
Naphtha, H.A.	95
Turpentine	55
Naphtha, VM&P	34
Mineral Spirits	32
Kerosene	23

When everything is considered, pine oil still remains the outstanding ingredient for quality cleaners and disinfectants.

Pine Chemicals Division, Naval Stores Department

HERCULES POWDER COMPANY

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kettles and a chlorination plant. About one-fourth of the company's production is handled at this plant.

Research and Development

An active research program is conducted in the laboratories located in the Jersey City plant. These laboratories include a microbiological research laboratory, two organic research laboratories, two product and process development laboratories and, in addition, two technical service laboratories and two quality control laboratories. The research program, under the direction of Dr. Reginald L. Wakeman, is aimed at developing new products and processes, improving existing products and processes, and reducing manufacturing costs.

In addition to its laboratory, Onyx maintains two pilot plants in Jersey City which are utilized to test and evaluate new products and processes prior to scheduling full scale plant production.

From a manufacturer of textile speecialties, Onyx has become a major supplier of bulk surface active agents which are utilized in numerous and diversified applications. Approximately 80 per cent of current business can be classified as industrial, while the remainder is in textile field.

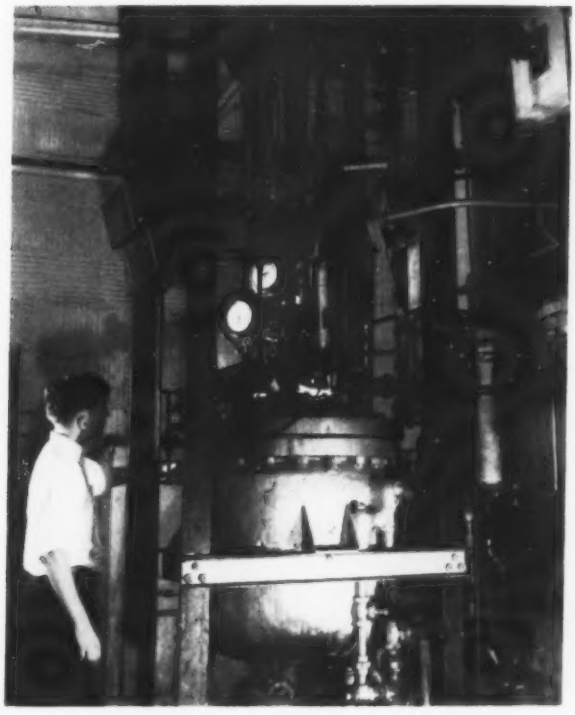
Recognizing the unique properties of cationics, Onyx has pioneered in the development of these chemicals and currently offers the largest selection of quaternary ammonium compounds commercially available from one organization. All of these products are manufactured in the Onyx Staten Island plant.

Quaternaries were synthesized as far back as 1916, but it was not until 1935 that their broad spectrum germicidal properties were recognized. Onyx was an early leader in supplying the original alkyl dimethyl benzyl ammonium chloride, still sold today as "BTC-50%." The usefulness of this type of product as a biocidal agent is indicated by its inclusion in the *U.S. Pharmacopoeia* as Benzalkonium Chloride.

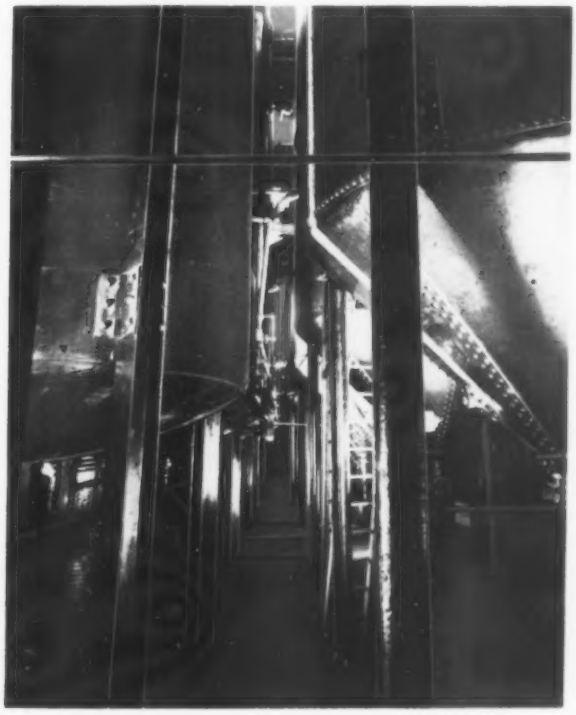
With the evergrowing acceptance of quaternaries, it became apparent that their usefulness might be limited in hard waters. It was in the Onyx laboratories that work on fractionation resulted in alkyl radicals yielding a predominant C_{14} derivative which increased the hard water tolerance level. Introduced as "BTC-824," this quaternary met with wide acceptance as a sanitizer for food processing and dairy equipment. More recent developments witnessed the advent of even more potent substituted benzyl derivatives and naphthal quaternaries, known commercially as "BTC-2125," "BTC-927," and "BTC-1100." Onyx holds patents on these products.

Now widely used as environmental disinfectants and sanitizers, many of these quaternaries are employed in the institutional field in combination with non-ionic detergents as multi-purpose cleaner-disinfectants. Quaternaries are the only class of germicides surface active by themselves, which insure penetration and good wetting action. They are also excellent deodorizers as evidenced by their current widespread use in room aerosols.

Stainless steel pilot autoclave in Onxy Jersey City plant.



Part of bulk storage tank room at Onyx plant.



Specially designed Onyx quaternaries, such as "Ammonyx 781," are used as biocides in water flooding for secondary oil recovery as well as for the treatment of water in cooling towers and air conditioning systems. Newer developments under field test now include the use of certain Onyx cationics as aquatic weed herbicides, plant growth regulators, and agricultural fungicides.

Onyx quaternaries such as "Ammonyx 4" and "Ammonyx 4002" find use in the cosmetic industry as hair and skin conditioning agents. "Isothan" has long been the accepted quaternary for dandruff control products.

Anionic surfactants represent another major Onyx product line. Over 16 different alkyl sulfates are available in addition to many other specialized materials. Onyx lauryl sulfates, sold under the trade name of "Maprofix," range from 30 per cent active liquids to the most highly refined crystalline sodium lauryl sulfate commercially produced. The latter material, "Maprofix 563," is used in many leading dentifrices.

Aerial view of Jersey City, N. J. plant of Onyx Chemical Corp.

Lauryl sulfate derivatives manufactured by Onyx find their way into multitudinous applications including cosmetics, fire fighting foams, household and industrial detergents, and emulsifiers for polyvinyl chloride polymers and other synthetic latices.

Other Onyx anionics are used as air-entraining agents in concrete and cinder blocks, in agricultural sprays, in metal burnishing compositions, in textile applications, and in paints. The list of applications includes most every segment of industry.

Another Onyx pioneering development are the high activity alkanolamides, available as the

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Right now—at the development stage—is the time to plan the odor of your household product.

And you'll save time, trouble and expense if you use an ODRENE. ODRENES are a series of fragrances scientifically compounded to solve the odor problems of household products. They are easy and economical to use—and available in a wide range of consumer-tested odor types. Each type is extremely versatile—readily adaptable to the special requirements of the product in which it is to be used.

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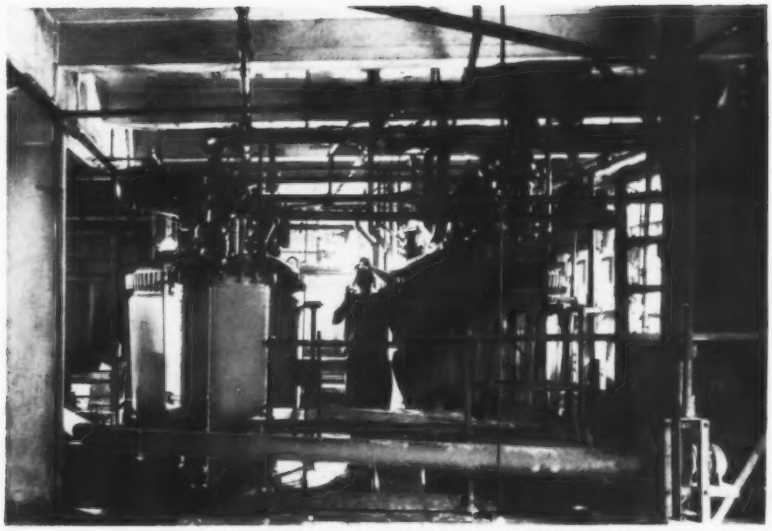


Glass lined reactors in bridge at Onyx plant.

"Super-Amides." Having a true amide content of well over 90 per cent, these products are used in conjunction with anionic and nonionic detergents as foam boosters, stabilizers, and thickening agents. Available in virtually water-white grades, "Onyx Super-Amides" are extensively used in cosmetics and liquid household detergents. Onyx also manufactures a complete line of regular fatty and amine condensates under the "Onyx-ol" designation.

To round out the surfactant line, Onyx supplies a variety of nonylphenol ethylene oxide condensates and certain polyglycol esters known as the "Neutronyx" series of non-ionics. Widely employed as basic detergents, emulsifying and wetting agents, several of these non-ionics provide extremely versatile end products in combination with Onyx quaternaries.

Textile research and technical service continues at a strong pace with the emphasis on volume chemicals rather than limited specialty items. This has resulted, for example, in the introduction of new wash and wear finishes, as well as the development of the first permanent anti-static finishes for synthetic fabrics. Commercially known as the "Astons," these new compounds are simply and permanently cured on the fabric and are not removed by washings or dry cleanings. Patents have been issued in major foreign countries and have been applied for in the United States. The "Astons" are a direct result of intensive basic chemical research carried on by Onyx in the field of cationics since the early 1940's.

Other Onyx textile specialties include softeners, water repellents, and various fabric finishes. Onyx also manufactures a line of resin emulsions for both the textile and paper fields.

The past four years, under the leadership of F. O. Robitschek, have witnessed both the up-grading of the entire product line as well as the introduction of several important new commercial products. The Quality Control Department has been re-vitalized to insure high standards of uniformity and maintenance of rigid product specifications.

Basic research and product application laboratories are being gradually and carefully expanded. Forthcoming developments include the introduction of a new and unique series of amphoteric detergents. Interesting and novel ethoxylated chemicals are on the horizon. With 50 years of past experience and a new corporate structure, Onyx Chemical Corp. looks forward to expansion and rapid progress in the chemical field.

CSMA Meeting

(*From Page* 111)

coverings exhibit a "dramatic" superiority in brightness and resistance to soiling over those on which no floor wax is used. Waxing also protects against scratching and dulling.

"Floor coverings, after use, and particularly some of the new, very smooth surface vinyl coverings, maintained by regular waxing, show markedly less scratching and dulling of the surface after the floor wax has been stripped off than the same coverings without waxing", the report concludes.

A blend of surfactants produced better results than did a single surfactant in preparing nonionic emulsions of polyethylene wax, it was reported in a paper by M. O. Brunson and L. D. Queen of Eastman Chemical Products, Inc., Kingsport, Tenn. Use of the hydrophile-lipophile balance (HLB) method of rating surfactants simplified selection of an appropriate emulsification system, the authors indicated. Preparation of nonionic wax emulsions suitable for use in light-colored floor polishes was carried out in a closed vessel under low steam pressure. This method offered advantages of lower color, greater handling ease with less equipment, and an increased production rate.

Polish compositions giving optimum performance of a new non-yellowing styrene copolymer latex were discussed in the final paper of the session. The paper, "Film Studies of Floor Polishes Based on a New Styrene Copolymer Latex", was prepared by Helmuth L. Pfluger and Charles F. Gebelein of the central research laboratory, Borden Chemical Co., Philadelphia.

According to Mr. Pfluger the

latex employed "is polymerized without supporting colloid but with internally copolymerized hydrophilic functional groups which perform an important part in film formation." He stated further, "Our formulation studies justify the viewpoint that the key property of a polish is its ability to form good films. This is conveniently measured as the threshold temperature required to form a good film.

A modification of the ASTM Blocking Point Apparatus was used for this purpose, Mr. Pfluger said.

He concluded, "neither the new latex nor certain familiar matrix resins form films by themselves at room temperature. Yet they can be formulated together, without external addition of low molecular weight plasticizers, into polishes which do form films. This is interpreted to be the result of participation by latex hydrophilic groups in the bridging accomplished by the resin matrix. The film might be called a resin-plasticized resin."

—★—

Olson in Colgate Post

Frank W. Olson was appointed a group leader last month in the research and development department, Toilet Articles Division at Colgate-Palmolive Co., New York. With the company since 1950, Mr. Olson, now heads the products formulation group of the hair products research section at the Colgate laboratories.

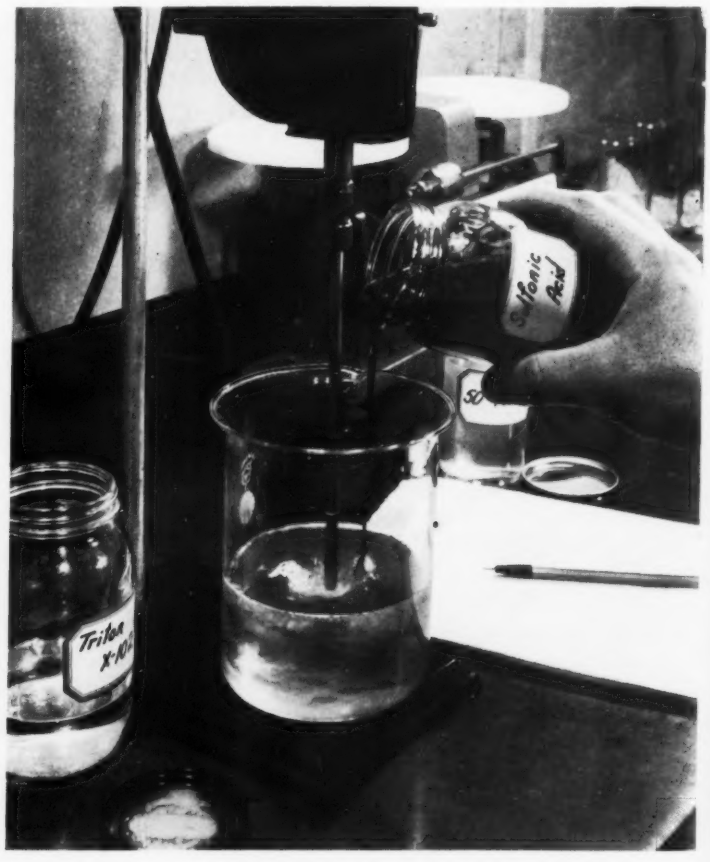
TGA Section Meets

(*From Page* 58)

"A Review of Product Development Problems Under the Federal Food, Drug, and Cosmetic Act" was presented by L. W. Hazleton, and co-authored by J. R. Elsea, of Hazleton Laboratories, Inc. While pointing to the common problems shared by the toilet goods, pesticide, food, and drug industries he pointed to some basic differences: Pharmacological evaluation deals largely with acute effects, whereas the toilet goods investigator faces predominantly problems created by chronic effects.

Modern legislation is based on the concept of prevention, Dr. Hazleton pointed out, whereas earlier laws were usually introduced after proven harmful effects made them imperative. Contemporary approach places burden of proof of safety upon the manufacturer. Official requirements in terms of animal numbers, species, and duration of study have been increasing costs of new products development. Analytical instrumentation needed to produce sufficient evidence to satisfy authorities has had the same effect. Any hope of reducing this burden lies in cooperation of the regulated in-

HERE'S ALL YOU NEED TO MAKE A **GOOD** LOW-COST LIQUID DETERGENT!



dustries.

A talk on "Toxicological Aspects of Certain Types of Cosmetics" by Dr. A. J. Lehman, Food and Drug Administration, U. S. Department of Health, Education and Welfare, stressed the difference in safety criteria applicable to drugs and cosmetics: Whereas some adverse effects would be tolerated following administration of an otherwise life saving drug, no such adverse effects should be tolerated in the case of a cosmetic, he said. The Food, Drug and Cosmetic Act is specific in its definition of a drug and a cosmetic. Problems are presented by the current trend to introduce pharmacologically active ingredients into toilet goods. These include antiseptics, antibiotics, hormones, and vitamins, formulated into products for topical applications and certain orally administered drugs intended to produce skin tanning and other cosmetic effects.

Materials for topical use must be tested for their potentials as primary irritants, sensitizers, causes of skin fatigue and eye irritation. Such tests must take into account the fact that cosmetics are used daily, over a long period (possibly a life time) by all types of individuals in varying states of health, Dr. Lehman said. Effects may be insidious and delayed, he added.

Dr. Lehman pointed to the complexity of the problem facing FDA owing to the "bewildering number" of different ingredients in toilet goods. Surfactants in cosmetic formulations may show adverse effects, with nonionics the least likely to do so and cationics the most likely offenders, according to the speaker. Ionization may create unforeseen changes with equally unforeseen effects.

Speaking of aerosols, Dr. Lehman said that hydrocarbon propellants are "relatively inert". But damage may be caused if the manufacturer does not make allowance in the nozzle opening and in the particle size for the consumer's tendency to spray from an insufficient distance.

Mercury and carbon tetrachloride should be eliminated from all personal products, Dr. Lehman said.

A basic cone and plate viscometer, adapted to the measurement of cosmetic emulsions under controlled conditions was introduced in a paper by Herbert Heinrich and John E. Clements, Coty, Inc., entitled "Usefulness of Rheology in Cosmetics". A contribution on "Organoleptic Quality and the Stereo-chemical Theory of Olfation", by James W. Johnston Jr. and Armando Sandoval, of Georgetown University, and a study on "Percutaneous Absorption of Estrogen" by Edward J. Masters of Helena Rubinstein, Inc., completed the program.■

This simple laboratory procedure shows how easy it is to make an efficient liquid detergent at minimum cost . . . and with no special equipment.

Mix correct quantities of sodium hydroxide, water and TRITON X-102, and then stir in the required amount of sulfonic acid. The final product is a ready-to-package liquid detergent for household or commercial use. A liquid phase is maintained throughout the process. The TRITON X-102 serves as an effective hydrotrope, foam stabilizer and detergent. Water, supplemental alcohol, dyes or perfumes may be added if desired.

Write for samples and help in formulating efficient, low-cost detergents with TRITON X-102.

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Packaging...

AEROSOLS · LIQUIDS · PASTES · POWDERS

To dress up packaging for its "Glamorene" rug cleaner, Jerclaydon, Inc., Clifton, N. J., has adopted newly designed cap and new label (right). Cap for 28-oz., private mold, Hazel-Atlas flint glass jar, was designed and manufactured by Hazel-Atlas Division of Continental Can Co., New York. Cap is lithographed in red, black and white. New, four-color label is by Empire Color Lithographers, New York. Product is also packaged in gallon and half-gallon jars.

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The VULCAN-ASSOCIATED line is complete—All styles and sizes of Steel Pails and Drums from 1 to 65 gallons—colorfully printed or lithographed—any standard pouring opening—proven-in-use Hi-Bake Protective Interior Linings. Seamed and Seamless Tin Cans—full size range—especially for the Ink Trade.

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The big – the small – we love them all. Metro always has been interested in the company on its way up – as well as the one that's arrived. Be it beer or baby food, soluble coffee or spirits, peanuts or pickles, away we go with research, marketing and solid production. The measure of Metro is not only the size of companies we serve–but, more important, their quality standards. They want the best and they get what they want – and more – with ***Metromatic!***

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packaging notes

Continental Names Paulsen

R. M. Paulsen has been named director of research for the plastic bottle and tube division of

R. M. Paulsen

Continental Can Co., New York, it was announced late last month by Robert B. Mesrobian, general manager of Continental's general packaging research and development division.

For the last 18 years Mr. Paulsen had been associated with United States Rubber Co. where he was engaged in various aspects of plastics technology. Prior to that he worked six years for the William A. Baehr Organization, consulting engineers, at their North Shore Coke & Chemical plant research laboratories.

—★—

Squeezable Tubes Gain

Sales of collapsible metal tubes in the first quarter of 1960 established a record amounting to 300,796,704 units. This total represents a seven per cent gain over 280,576,080 units solds in the first quarter of 1959, according to the Collapsible Tube Manufacturers Council who collates these figures.

Largest shipments were made to toothpaste marketers, accounting for 151,773,696 tubes, a six per cent gain over last year's figure.

Tubes for packaging household and industrial specialties such as caulking compounds, adhesives, lubricants and others, were sold at the rate of 44,520,912 units, representing a five per cent increase over sales in the first quarter of last year.

A downward trend continued in metal tubes for shaving cream. Sales of 10,012,176 units constitute a drop of six per cent from the total reported a year ago.

—★—

Auto Specialties Compete

"Best packaging of an automotive chemical product" and "best packaging of a non-automotive chemical product" are two categories newly added to the Progress Award Competition sponsored by the National Auto Accessory and Parts Exhibit in Las Vegas, Nev. The show is due to be held Sept. 12-15. Awards will be presented at the awards dinner, Sept. 14, at the Sahara Hotel, Las Vegas.

Fred N. Dundas, below, was reelected president of the Glass Container Manufacturers Institute at a meeting of the organization's board of trustees held May 25 at the Greenbrier Hotel, White Sulphur Springs, W. Va. Mr. Dundas is president of Dominion Glass Co., Ltd., Montreal. Other officers elected during the three day meeting included C. G. Bensinger of Owens-Illinois Glass Co., Toledo, first vice-president, and J. G. Ferguson of Laurens Glass Works, Inc., Laurens, S. C., second vice-president. New trustees are: R. H. Hetzel, Armstrong Cork Co., George W. Meyer, Glenshaw Glass Co. and William J. Green, Thatcher Glass Manufacturing Co.

Crown Appoints Two

Thomas J. Hughes has been appointed New York district manager for Crown Cork & Seal Co.,

Thomas J. Hughes

Philadelphia, it was announced last month by Daniel F. Sheehy, northeast regional manager. At the same time William B. Dennis, Jr., was selected as district sales manager of Cincinnati, Harvey Tull, regional sales manager announced.

Prior to rejoining Crown as district manager, Mr. Hughes was sales manager of the Paterson, N. J., district office of Continental Can Co., New York. He had been a sales representative in metropolitan New York for Crown from 1941, when he first entered the packaging field, until 1944. He joined Continental in that year and, with the exception of a short period in which he was in business for himself, has been with the company since.

Before his recent appointment as sales manager in Paterson, he was sales manager for general line cans in the eastern metal division. He is a 1937 graduate of the University of Notre Dame.

Mr. Dennis joined Crown five years ago as a sales representative, first in Florida and later in Cincinnati.

New Plastic Bottle Units

Plans to open new plants in Chicago and Cincinnati for the manufacture of semi-rigid plastic bottles for packaging liquid detergents and other household products were announced recently by Owens-Illinois Glass Co., Toledo, O. The Chicago plant is expected to begin production by August 1, and the plant at Cincinnati should be in operation by mid-September.

The new facilities will bring to five the number of new plastic container plants Owens-Illinois has opened since it introduced the high density polyethylene bottle two years ago. The other plants are located in Kansas City, Mo.; Los Angeles, and Toronto, Canada. The company also makes bottles in closure and plastic plants at Glassboro, N. J., and St. Charles, Ill.

"The five new O-I plants are eloquent evidence of the overwhelming reception given the new plastic bottle by makers of liquid detergents, household cleaners and other household products since we introduced it in March of 1958," Carl R. Megowen, president of Owens-Illinois, said in announcing the two new plants.

—★—

New Vulcan Plant

A new 25,000 square foot plant and office building has been completed by Atlantic-Vulcan Steel Containers, Inc., at Peabody, Mass., it was announced last month by Gordon D. Zuck, president. The plant is in full operation, producing steel pails and slip cover ink cans.

The Peabody factory makes pails ranging from 1½ to seven gallons, open head and closed head, with all standard pouring openings, "Hi-Bake" linings, varicolored lithographing and silk screen printing. All types of small drums and specialty tin cans for manufacturers and packagers in the north and northeast of insecticides; sanitary, agricultural and other specialty chemicals; food; and printing inks are being produced, acording to Mr. Zuck.

Atlantic-Vulcan's new building is located on the B & M Railroad and has large truckloading facilities. The firm is one of seven steel container manufacturing units recently merged to form Vulcan-Associated Container Companies, Inc.

COINCIDENCE . . . The idea of the egg as a "perfect package" was hatched as a promotion piece last month by two companies very much interested in the packaging field. To boost its brand of "Ucon" aerosol propellants, Union Carbide Chemicals Co. mailed promotion piece at left. Inside gold egg, which is nested in excelsior, is tiny curled message which proclaims that "no one has a better package for aerosol fillers and marketers than Carbide's customer service program." To call attention to a series of novel business magazine advertisements, the theme of which is "The perfect container just doesn't happen!", American Can Co. last month mailed out a release packed in a key opening can. Two polyurethane eggs, one of which appears in front of can, were packed with the release telling about proposed advertisements.

New Atlantic-Vulcan Steel Containers plant in Peabody, Mass.

Winning Set-up Boxes for Soaps

AMONG the winners in the 1960 Tenth Annual Set-Up Box Promotional Competition were four soap packages. Sponsored by the National Paper Box Manufacturers Assn., Philadelphia, contest attracted a record 2,406 entries. 99 were winners. Entries were displayed during recent annual convention of NPBMA in New Orleans.

Box for "Dogette" aerosol grooming aids, top, left, of Lora, Inc., New York, won in "Excellence Award in Soap Boxes" category. Lid's die-cut windows allow direct view of decorative, descriptive labels on cans. Box base is fitted with rough corrugated for protection of product, and is attractively finished in white paperboard cut out to frame products and hide dunnage. Mutual Paper Box Corp., Chicago, supplied winning box.

A "First Award in Soap Boxes" went to Beauty Counselors, Inc., Detroit, for "a simple, effective packaging for soap, achieved with basic set-up box base – lid combination, overwrapped with tasteful surface design to blend with contents. White oval areas tie in with shape of soap, give pattern to design and allow space for product identification." Stecker Paper Box Co., Detroit, manufactured the box.

Jacqueline Cochran's "Shining Hour Gay Tripper" box, bottom left, received two "excellence awards." Light blue, latticed, open-face display package was judged outstanding for "superiority of construction" and for "excellence" as a cosmetic rectangular box. On white base of package appears in gold lettering the trade name of gold perfume bottle with purse size companion. Bottles stand on extended alcoves of a blue platform, and may be viewed through latticed cover. Wallace Paper Corp., Maspeth, N. Y., supplied this award winning box.

"Abano" soap and cosmetic boxes, top, right, were winners of "excellence awards" in two categories: "best surface design and execution" and for "excellence as soap boxes." "Soap box possesses clean lines of form and design," judges said, adding "the sanitary white with a mosaic tile motif printed in lustre inks, stimulates non-gift and 'gift' buying of bathroom cosmetics. The "Abano" line of Prince Matchabelli, Inc., New York, was designed by Rodolfo E. Urias. Newark (N. J.) Paper Box Co. manufactured set-up boxes.

Procter & Gamble Co., Cincinnati, took first award in "promotional boxes" with its "Knock on Any Door" presentation, (right, center). Unit, which contains samples of "Crest" and "Gleem" dentifrices and "Royal Drene" shampoo, has multiple opening doors which furnish additional descriptive material on the products. A pull-up display on back affords the flash copy "punch." Doors, with silver knobs, open to display items on velvet background. C. W. Zumbriel Co., Cincinnati, produced winning P&G set-up boxes.

"Little Miss Pixie" toiletries box, bottom, right, of Lander Co., New York, took "excellence award in rectangular cosmetics class." Children's toiletries are well-displayed in this "beautifully executed set-up box," said judges. Display technique of bottles, soap and bath salt makes the package an impulse retail item, they said. L. Gordon and Son, Inc., Baltimore, manufactured set-up box.

—★—

Planished Pail Seams

Bennett Industries, Inc., Peotone, Ill., is now supplying all "Hi-Bake" enamel lined steel pails with planished seams, it was announced recently. Planished seams eliminate sharp edges which may penetrate lining and expose product to effects of corrosion, Bennett claims.

Ucon brand propellants put action in products

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Hats off to the can that flips its lid—
CONTINENTAL'S NEW FLIP CAP*

For beauty, economy and convenience, Continental's new Flip Cap* can't be topped. Its dripless pour spout—plus the permanently hinged Flip Cap—makes it perfect for practically all liquids and granulated products now packaged in round or oblong nozzle-type cans.

Snap back Flip Cap and it *stays open*...snap it shut and it *stays shut*. The larger can opening permits higher filling speeds. Flip Cap nozzle inserted after filling assures positive closure. And the top of the container can be fully lithographed—no solder splashes, no flux spots or heat scorching. Flip Cap is available with either $\frac{1}{2}$- or $\frac{3}{4}$-inch opening, and in a variety of colors. For the full story, ASK THE MAN FROM CONTINENTAL!

*Patents pending

CONTINENTAL CAN COMPANY

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Central Division: 135 S. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 790 Bay St., Toronto 1
Cuban Office: Apartado 1709, Havana, Cuba

Bennett Advances Execs.

Bennett Industries, Inc., Peotone, Ill., recently announced election of Stevens A. Bennett, former president, as chairman of the board. Anthony J. Gasbarra, former executive vice-president, succeeds Mr. Bennett as president of the firm.

Bennett Industries make steel pails and drums, and fibre drums, fabricate structural steel and plate.

—★—

Continental Can's Spending

Continental Can Co. expects its capital expenditures in 1960 to amount to about $75,000,000, compared with $89,000,000 in 1959, according to Lawrence Wilkinson, executive vice-president, who gave a talk before the New York Society of Security Analysts.

The company's net earnings in 1960 might range between $3.20 and $3.50 a share, Mr. Wilkinson said. In 1959 net totaled $40,009,000 or $3.20 a share, on sales of $146,529,000.

He said that the firm hopes to take care of its heavy capital expenditures from retained earnings and depreciation. But if the drain becomes too great Continental Can has "sufficient leeway" to undertake additional debt financing.

The company's expected sales growth factor under normal conditions is 3½ to 4 per cent a year. This year, owing to the steel strike "We've lost half a year with no growth at all" Mr. Wilkinson said, and for all of 1960 the sales growth is expected to be about 1¾ to two per cent.

—★—

H. R. Shepherd "Profile"

Herman R. Shepherd, founder and president of Aerosol Techniques, Inc., Bridgeport, Conn., contract aerosol loader, is featured as the "County Businessman" in the April issue of "Fairfield (Conn.) County Business." The "profile" of Mr. Shepherd traces his career from the time he began doing research on aerosol products shortly after World War II, in which he served with the U. S. Army Air Corps, following his graduation from Cornell University. Prior to the formation of his own company in 1955, Mr. Shepherd was one of the founders of Connecticut Chemical Research Corp., Bridgeport, and served as its vice-president in charge of research. Earlier he had been assistant to the director of research of the aerosol divisions of Bridgeport Brass Co., one of the early aerosol firms.

In addition to his other activities, Mr. Shepherd is a member of Young Presidents' Organization, Chemical Specialties Manufacturers Assn. and Society of Cosmetic Chemists. Also he is editor of the forthcoming *Encyclopedia of Aerosols*, and wrote the chapter on aerosols for the *Encyclopedia of Cosmetics*.

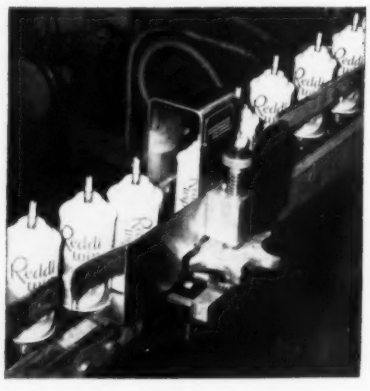
Mr. Shepherd resides in Fairfield, Conn., with his wife and their four children.

—★—

Low Priced Code Marker

A code marking machine for either flat or concave bottom bottles and cans to sell for $400.00 has been introduced by JCL Engineering Co., P. O. Box 36004, Wilshire-La Brea Station, Los Angeles 36. Known as the JCL sideline coder the machine features self adjustment to line speeds, quick change type holder, and special inking system, according to the manufacturer. It is constructed of stainless steel and aluminum, can be used under wet or dry conditions.

JCL sideline coder in operation



New Plastic Bottle Unit

Ground has been broken for a new building, designed specifically for the blow molding of plastic bottles, it was announced recently by Olympic Plastics Co., Los Angeles. In addition to a complete line of standard plastic bottles of both conventional and linear polyethylene, Olympic is making available design facilities for custom molded shapes. The new unit will be completed and operating in the third quarter of this year.

—★—

Crown Names Siebert

Election of Robert J. Siebert as a vice-president of Crown Cork & Seal Co., Philadelphia, was announced last month by John F. Connelly, the firm's president.

Making his headquarters at Crown's San Francisco plant, Mr. Siebert will direct all of the company's manufacturing and sales activities in the Western region, comprising the states of Washington, Oregon, California, Nevada, Idaho, Montana, Wyoming, Utah, and Arizona.

With Crown since 1941, Mr. Siebert has served in field sales and as manager of several districts and regions.

—★—

Sun-Lac Has New Process

Sun-Lac, Inc., 274 Lafayette Street, Newark, N. J., announced recently a new solubilizing method for perfume oils in aerosol preparations. Core of the invention is said to be procedure whereby ingredients are mixed.

Said to permit pressure packaging of fragrance products without modifying formulations, the process is currently being used to load perfumes for several manufacturers, Sun-Lac claims.

Formulations submitted to the new process are said to show stability and freedom from precipitate after shelf tests extending over two years. Sun-Lac is accepting samples from manufacturers for processing free of charge.

(*Turn to Page* 202)

"Knox furnishes us clear, quality bottles," says plant manager of largest aspirin manufacturer

"Our glass bottle suppliers have to be able to meet our exacting specifications as to size, quality and color. Although breakage isn't much of a factor, we watch that closely, too," says the General Plant Manager of the world's largest producer of aspirin tablets.*

"Knox Glass has been an important supplier of bottles for us since November, 1954. We know we can count on getting the clear, absolutely colorless glass we must have when we buy from them.

"Because of increased market demand, our business is continually expanding. This underscores to us the important role that our several able glass suppliers play in our expansion.

"We are, frankly, pleased to do business with Knox. They have always been very cooperative and helpful in our dealings with them. Knox has, for example, offered the services of its engineering facilities, and while we rarely require outside assistance of this nature, it's good to know we can make use of it if we need to."

Find out how Knox Glass can meet your exacting specifications. Contact Knox Glass, Inc., Knox, Penna., or any of 37 sales offices throughout the nation.

*Name available on request.

the new/**KNOX GLASS**

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FACILITIES

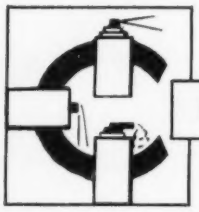
EXPERIENCE

ALL ADD UP TO

SERVICE

WHEN YOU PRESSURE PACKAGE YOUR PRODUCT AT CONTINENTAL FILLING

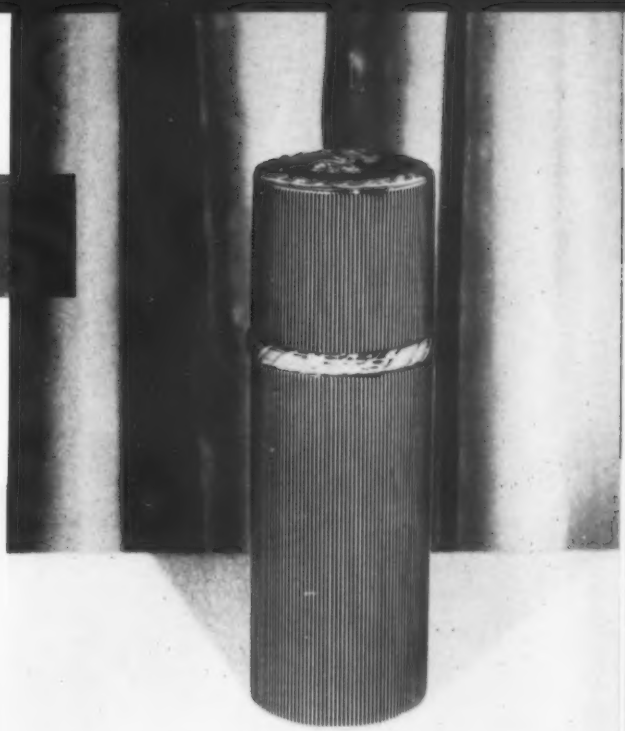
Call Continental Filling Corporation
for Pressure Packaging of All Types



CONTINENTAL FILLING CORPORATION

Danville, Illinois

WHAT'S NEW?



"Shampoofs" by Helene Curtis, Inc., Chicago, are now available in triangular form. Each polyethylene pyramid contains one complete "Shampoo Plus Egg," two lathers. Peach and yellow package sells at 10 cents each, 59 cents for unit pack of six. Display drum holds 144 units. Yellow tip of package zips off for use.

NEW!
IDEAL FOR TRAVEL! CONVENIENT TO USE!
Helene Curtis shampoo plus egg shampoofs
only 10¢ each
shampoo plus egg shampoofs
shampoo plus egg shampoofs

"Intimate" fragrance mist by Revlon, Inc., New York, now comes in novel purse size aerosol shown above. Two ounce unit dispenses 1000 metered applications of perfume mist. Revlon does its own filling. Risdon Mfg. Co., Naugatuck, Conn., supplies ribbed metal case with break-up valve by V.C.A., Inc., Bridgeport. Retail price is $5.00, plus tax.

"Patent Sparkle" by Leatherfoam, Inc., South Bend, Ind., releases fine spray claimed to clean and put high lustre on vinyl or patent leather articles. Sprayed from distance of 2 to 3 inches product forms foam on surface to be wiped with soft dry cloth. Filled by Continental Filling Corp., Danville, Ill., in American Can Co. container, 5-ounce package features "Micro-Mist" valve by Risdon Manufacturing Co., Naugatuck, Conn., retails at $1.00.

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PRESERVES RUBBER
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DU PONT
REG. U.S. PAT. OFF.
Telar
TRADEMARK
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NEVER DRAIN
anti-freeze & anti-rust coolant

◀ FACING PAGE

New all-purpose cleaner, degreaser and wax stripper, introduced recently by National Chemical Laboratories, Inc., Philadelphia, is claimed to be non-toxic, non-flammable and non-corrosive. "Chem-Eez" is packed in one gallon glass bottles, five gallon pails (shown), and 15, 30 and 55 gallon drums. Demonstration spot spray bottle (also shown) is fitted with plastic spray plunger. Bottle is decorated with graduation lines to show recommended concentrations for different applications.

Claimed to be first pressure packaged home permanent is "Push Button Lilt" of Procter & Gamble Co., Cincinnati. Packaged in a plastic coated glass bottle by Wheaton Plasti-Cote Co., product is creamy foam waving agent that features collapsible foam. Continental Filling Corp., Danville, Ill., is the loader. Valve by Risdon.

"DU-OL" rust-buster and penetrant has just been added to line of Supersite Corp., Derby, Conn. Nitrogen propelled product frees frozen and rusted parts, as well as being lubricant and preservative for rubber. Pace, Inc., Wilmington, Del., loads product in red, white and black lithographed Crown can, fitted with Precision valve. Overcap is by West Penn.

New "Telar" anti-freeze and anti-rust auto coolant, announced recently by Du Pont, never needs to be drained from properly operating cooling system, maker says. Normal red color of product changes to yellow if coolant is contaminated. Sold through service stations, "Telar" is $5 a gallon.

THIS PAGE ▶

Hysan Products Co., Chicago, recently announced "Surgent", a new liquid lotion hand soap that includes hexachlorophene as germicidal ingredient. Product has pink creamy lather. Packaged in standard size containers up to 55 gallon drums.

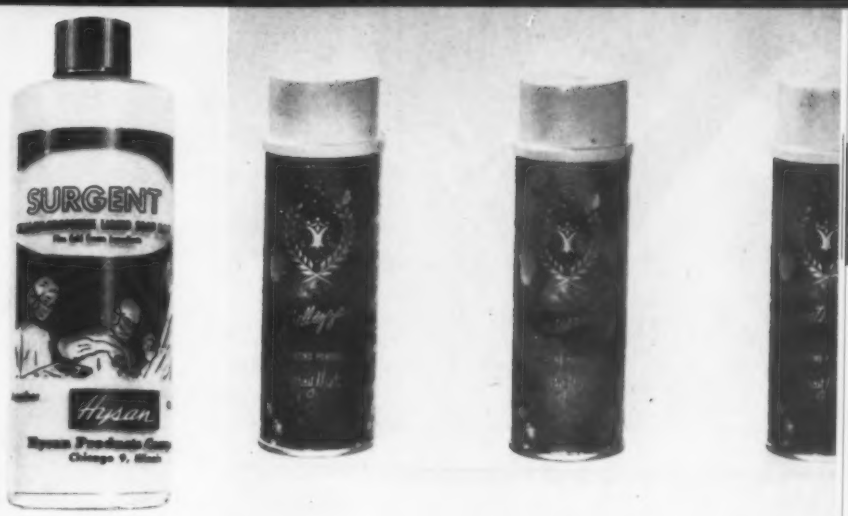
Push-button dispensed spray mist dusting powder in four fragrances is now being marketed by Lenel, Inc., Dallas, Tex. Old Empire, Inc., Newark, N. J. contract loads the product in 8-oz. American cans, fitted with Aerosol Research Co. valves. Embossed paper labels with a distinctive color are supplied for each of the four fragrances: "Private Affair" is dark green; "Caressant", brownish orange; "Bellezza", blue and "Trifling", red.

Free purse size brush with every purchase of $1.69 and $1.95 size of regular or super soft "Spray Net" was spring offer of Helene Curtis, Chicago. Brush was available in two shades of blue, pink or alabaster white.

What is probably first and only exclusively feminine pressure-packaged shave creme, new "Pink Blush", has just been introduced by Helene Curtis. Lithographed pink Crown can, contract loaded by G. Barr & Co. 6 oz. container retails for $1.35 plus tax.

"Labsol", a water soluble, solvent cleaner for lavatory and toilet systems is now being marketed in 32 oz. "Plastene" polyethylene dispenser packages by Lab Automated Chemicals, Baltimore. Non-toxic, the product may be used on porcelain surfaces, porcelain enamel and in septic systems.

Packed in plastic bag, new "Clean-O-Magic" all-purpose cleaner, when mixed with water, produces one gallon of concentrated liquid cleaner. According to the maker, Scaletty-Corydon Co., Minneapolis, the concentrate makes from 30 to 40 gallons of cleaning solution, depending upon surface to be cleaned.



OUR ROOTS ARE DEEP, OUR AIM IS HIGH

but Valves don't grow on trees

Some fifteen years ago, the aerosol industry was born. Shortly after, the Precision Valve Corporation began. As the industry grew, Precision did too, in research, in discovery, in development.

Today, with over 500 employees and more than 60,000 square feet of manufacturing space devoted to over 10,000 different combinations of specifications for aerosol valves, Precision works with the industry to create and develop new aerosol designs to improve current procedures.

Now, on the threshold of further expansion, Precision rededicates itself to serving the aerosol industry and its customers. A major portion of Precision's new plant program will be directed toward research and development; its modern production facilities further improved; its friendly hand extended and dedicated to helping everyone.

Yes, Precision's roots are deep . . . its aim high!

PRECISION VALVE CORPORATION • 700 NEPPERHAN AVENUE, YONKERS, N. Y.

new trade marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany each notice of opposition.

Metadelphene—This for insect repellent. Filed Aug. 31, 1959 by Hercules Powder Co., Wilmington, Del. Claims use since June 15, 1957.

Ormet — This for insecticide. Filed Sept. 3, 1959 by American Cyanamid Co., New York. Claims use since Aug. 19, 1959.

Dura—This for liquid starch. Filed Oct. 21, 1959 by B. T. Babbitt, Inc., New York. Claims use since April 1949.

Sani-Pool—This for disinfecting, purifying, and deodorizing preparation for use in swimming and wading pools. Filed July 1, 1957 by Sears Roebuck and Co., Chicago, assignee of Gateway Chemicals, Inc., Chicago. Claims use since during 1954.

Churn-Kleen — This for detergent sanitizer primarily for use in the dairy industry. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Mr. Sheen—This for sudsing cleaner, cleanser, and detergent. Filed Aug. 17, 1959 by Procter & Gamble Co., Cincinnati. Claims use since May 1, 1956.

Goldex—This for shampoo soap. Filed Sept. 11, 1959 by Goldsmith Bros., New York. Claims use since Aug. 24, 1938.

Forward—This for all-purpose liquid cleaning preparations. Filed Oct. 12, 1959 by S. C. Johnson and Son, Inc., Racine, Wis. Claims use since on or about Aug. 20, 1959.

Alemite — This for detergent cleaner for carburetor and engine systems having incidental rust inhibiting and lubricating properties. Filed Oct. 12, 1959 by Stewart-Warner Corp., Chicago. Claims use since at least as early as Jan. 3, 1956.

Bold—This for sudsing cleaner, cleanser, and detergent. Filed Oct. 15, 1959 by Procter & Gamble Co., Cincinnati. Claims use since Sept. 9, 1959.

Kleenize—This for all purpose household cleaner and detergent. Filed Oct. 26, 1959 by Alva L. Crook, Decatur, Ga. Claims use since Sept. 2, 1958.

Sterile—This for liquid cleaners for porcelain, tile, and like surfaces. Filed Nov. 3, 1959 by Advance Chemical Co., San Francisco. Claims use since on or about Mar. 1, 1951.

Show Room — This for fluid polish and cleaner for varnished and lacquered surfaces. Filed Aug. 26, 1959 by Star Chemical Co., Westchester, Ill. Claims use since July 20, 1959.

Walbernize—This for cleaning and glazing preparations for use on automobiles. Filed Sept. 23, 1959 by Walbern Laboratories, Inc., Decatur, Ill. Claims use since on or about Nov. 1, 1955.

Bantee — This for golf ball cleaner. Filed Apr. 9, 1959 by Paul-Reed, Inc., Charlevoix, Mich. Claims use since April 1958.

Conta-Sonics—This for cleaning fluids for cleaning contact lenses, spectacles, clogged chucks and polishing tools, abrasive stones, and unpainted metals. Filed June 22, 1959 by Plastic Contact Lens Co., Chicago. Claims use since May 28, 1959.

Fur Glamor—This for chemical preparation for cleaning, glazing, mothproofing, and otherwise beautifying furs. Filed July 27, 1959 by Saja Chemical Co. of America, Inc., Coral Gables, Fla. Claims use since on or about Mar. 1, 1959.

Garden Bouquet—This for toilet soap. Filed Aug. 17, 1959 by Purex Corp., Ltd., doing business as Manhattan Soap Co., South Gate, Calif. Claims use since July 24, 1940.

M — This for detergent for cleaning laboratory glass ware and instruments. Filed Sept. 15, 1959 by Microbiological Associates, Inc., Bethesda, Md. Claims use since Aug. 18, 1954.

Varaqua—This for water emulsion polymers and resins. Filed Feb. 27, 1958 by McCloskey Varnish Co., Philadelphia. Claims use since July 1, 1958.

Wash and Wear—This for floor wax and dressing. Filed Dec. 18, 1959 by Chemical Service of Baltimore, Inc., Baltimore. Claims use since Dec. 11, 1959.

Zecol—This for wax preparation which cleans and polishes automobiles. Filed Dec. 18, 1959 by Zecol, Inc., Milwaukee. Claims use since Aug. 1, 1932.

Sure-Mint—This for household disinfectant and deodorant. Filed Nov. 5, 1958 by Joseph F. Uddo doing business as F. Uddo & Sons Co., New Orleans, La. Claims use since May, 1958.

Thermos — This for chemical fire kindler. Filed Jan. 15, 1959 by American Thermos Products Co., Norwich, Conn. Claims use since Dec. 18, 1958.

Sulfolan—This for wetting and washing agents, especially for textiles. Filed March 4, 1959 by Dehydag, Deutsche Hydrierwerke G. m. b. H., Duesseldorf, Germany. Owner of German Reg. No. 478,077, dated Sept. 25, 1934.

Para-Fume — This for moth tablets; moth crystals, also used as a deodorant; moth blocks, also used as mildew retardant, and toilet bowl deodorizer for household and institutional use. Filed April 28, 1959 by Klasco Products Co., doing business as Claimor Products Division, Downey, Calif. Claims use since March 19, 1959.

Doom—This for aerosol insecticide. Filed May 25, 1959 by Howard A. Chittick, doing business as Fairfax Biological Laboratory, Clinton Corners, N. Y. Claims use since on or about Aug. 1, 1954.

Klor-o-Brite—This for chlorine bearing compounds for use as disinfectants, cleaners, bactericides, and deodorants. Filed June 17, 1959 by Britex Corp., Boston. Claims use since July 5, 1956.

Roost no More—This for chemical bird and rodent repellents. Filed Oct. 19, 1959 by Joseph H. Fink, doing business as National Bird Control Laboratories, Skokie, Ill. Claims use since February 1950.

Surety — This for antifreeze solution. Filed Nov. 5, 1959 by Surety Oil Corp., Springfield, O. Claims use since Oct. 12, 1959.

Jet-Dry—This for drying agent dispensed by rinse injector into final rinse of a dishwashing machine. Filed Dec. 15, 1959 by Economics Laboratory, Inc., St. Paul, Minn. Claims use since Oct. 1958.

Flows — This for automobile windshield washer fluid. Filed Sept. 17, 1959 by Ralph Stone doing business as Stone Soap Co., Detroit. Claims use since on or about Aug. 1, 1956.

Princess Dial—This for bath and toilet soap. Filed Nov. 6, 1959 by Armour and Co., Chicago. Claims use since Jan. 21, 1959.

Wilgleam — This for glass cleaner. Filed Nov. 10, 1959 by Wilson Products Co., Cincinnati. Claims use since Oct. 28, 1959.

Bol Maid—This for liquid cleaner for wash bowels, toilet bowls, bath tubs and porcelain surfaces. Filed Nov. 12, 1959 by Betco Corp., Toledo, O. Claims use since May 27, 1958 .

Pool-Gard—This for chemical to be added to water in swimming pools for prevention of algae and as aid in inhibiting bacterial growth. Filed April 14, 1958 by Garde Drug Co., Philadelphia. Claims use since Dec. 4, 1956; subject to interference with Reg. No. 657,363.

Wizard — This for charcoal lighter fluid. Filed June 18, 1959 by American Home Products Corp. doing business as Boyle-Midway, New York. Claims use since Nov. 4, 1953.

Bir—This for body insect repellent. Filed Aug. 28, 1959 by J. I. Holcomb Manufacturing Co., Indianapolis. Claims use since Aug. 13, 1959.

Krystallex — This for detergents for general washing and cleaning soaps and for hair shampoos. Filed Feb. 16, 1959 by Krystall Chemical Co., Chicago. Claims use since Aug. 16, 1954.

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European Aerosol Meeting

A report by Fred Lodes, treasurer of the Chemical Specialties Manufacturers Assn., and official representative of CSMA at the Second International Congress of the Federation of European Aerosol Associations held in Dusseldorf, Germany.

THE second International Congress of the Federation of European Aerosol Associations was held in the Park Hotel, in Dusseldorf, Germany, on April 27th and 28th, 1960. It was a privilege and a pleasure to have the opportunity to be present at this meeting and I was indeed satisfied with the progress that has been made in Association activity during the past two years in Europe. The C.S.M.A. is very highly regarded and looked upon with great interest. As a representative of the C.S.M.A. I must report that the courtesies extended to me were very heartwarming indeed. Also they are appreciative that the C.S.M.A. is observing their growth and behavior with interest.

As there appears to be an element of confusion amongst many C.S.M.A. members as to the over all set-up of the various Associations in Europe. I would like to briefly review the present structure in the interest of clarification. I have also prepared a simple diagramatic sketch to illustrate the organizational set-up.

The Federation of European Aerosol Associations (F. E. A.) is the parent Association and is made up presently of four groups: The International Aerosol Association (I.A.A.) of Switzerland; The Interessen-Gemeinschaft Aerosole (I.G.A.) of Germany; The Comite' Francais des Aerosols (C.F.A.) of France; The Finnischen Aerosol-Vereins (F.A.V.) of Finland. The F.E.A. is comprised of eight delegates, two from each of the above four Associations, and is headed by the newly elected President, Francois Harlan, of France.

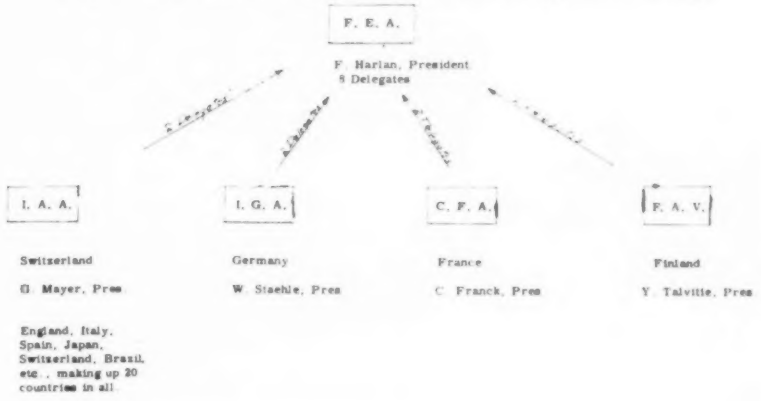
Frederick G. Lodes

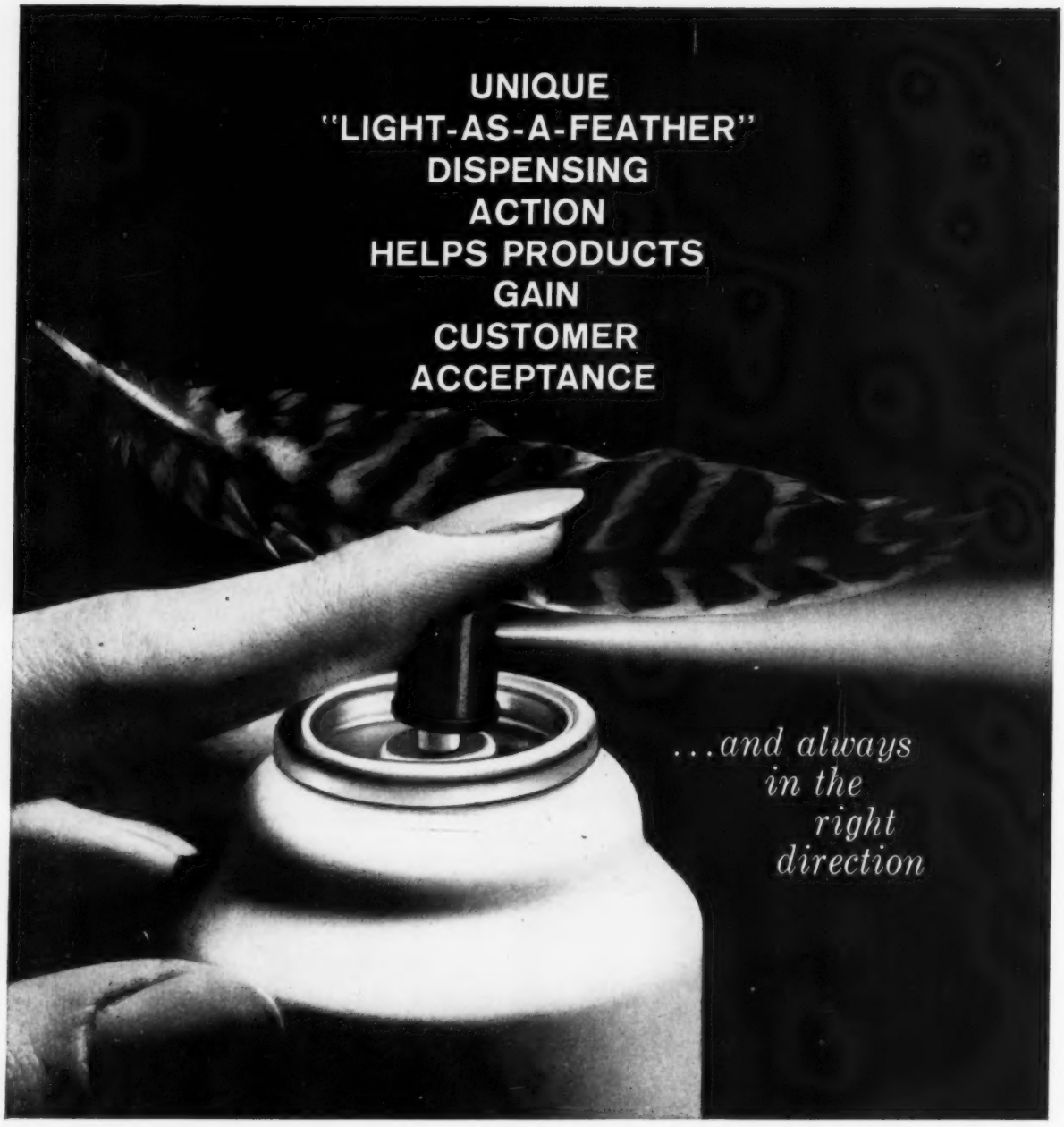
The I.A.A. is probably the largest of the above Associations, with regard to membership and is a "catch-all" for countries that have not as yet formed their own aerosol Association. Gerald Mayer is the President of the I.A.A., and it has an individual membership of approximately 80. Countries such as England, Italy, Spain, Japan, Mexico, etc., make up its membership and represent approximately 20 countries in all. As the aerosol interests grow sufficiently in a particular country to form its own aerosol association, then that country becomes a member, directly, of the F.E.A. and relinquishes its membership in the I.A.A. Spain is a good example, as it is currently forming its own association and will apply for membership in the F.E.A. Likewise I found association interest increasing in England and Italy, and I believe shortly these two countries will also have their own association, directly under F.E.A.

The I.G.A., headed by Welhelm Staehle, was host of the F.E.A. meeting in Dusseldorf. I must say that Mr. Staehle did an exceptionally fine job in the arrangements, scheduling of meetings, etc., and a feeling of hospitality was prevalent throughout. There were approximately 250 individuals registered for the aerosol meeting and they were all given ample and equal

(*Turn to Page* 141)

Diagramatic sketch illustrating European aerosol organization set-up.





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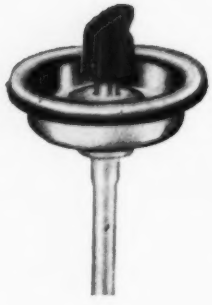

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Liquids, Powders or Pastes for shipment via rail, water or truck.

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Powders — Liquids
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Complete research
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EUROPE'S AEROSOL MEETING

(*From Page* 141)

opportunity to meet one another and to be present at the various functions.

I had the opportnuity to meet the various association directors, sit in on the executive meetings, technical discussions and listen to the aerosol papers delivered. There was definitely a feeling of sincerity, interest and conscientiousness throughout the meeting. All appeared to be fully cognizant of the many important contributions that Association activities can make to a new and growing industry. There is a hopeful feeling that a more active cooperative program between the F.E.A. and the C.S.M.A. will sometime in the not too distant future, become a reality.

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Approximately 150 attended the session for the delivery of aerosol papers. These papers included: "Aerosol Laws and Regulations in the various countries and their irregularities," by Mr. A. Herzka, Pressurized Packaging Consultants Ltd., London; Sound Picture "Aerosols" provided by Farbwerke Hoechst AG., Frankfurt (M)-Hoechst; "Aerosol Glass Containers, a technical discussion between producers and consumers," by Mr. Ing. Bernard Gouarin, Cie. de Saint-Gobain, Neuilly-sur-Seine; "Aerosols in Cosmetic and Pharmaceutical Fields and how to check on the compatibility," by Dr. K. O. Jacobi, Kolmar Research Center, Wiesbaden. Although several of the papers were rather fundamental on certain aerosol principles and studies they were nevertheless very informative and certainly indicated considerable time and effort in preparation. I was particularly interested in the method in which the paper on glass bottles was delivered, as it represented a deviation from our usual practice. This paper was presented in the form of a question and answer delivery with the questions (pre-arranged), coming from the audience.

Because of the language problem, which we are not confronted with, the papers delivered must be typed in completed form

(*Turn to Page* 201)

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manufacturer of
AEROSOL LABORATORY and PRODUCTION EQUIPMENT
• Complete Aerosol Laboratory
• Hand Operated Can Crimper
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• Combination Can & Bottle Capper
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Thonet to Puritan

Theodore A. Thonet has been named to the newly created post of associate research director

Theodore A. Thonet

of Puritan Aerosol Corp., Boston, it was announced recently by Harvey White, Puritan president.

Prior to his recent appointment Mr. Thonet was research director for Continental Filling Corp., Danville, Ill. Author of a number of technical articles, Mr. Thonet has applied for several patents in the pressure packaging field.

—★—

Changes at Plasti-Kote

Herbert Fine, founder and president of Plasti-Kote, Inc., Cleveland aerosol paint manufacturer, announced his resignation as president of the firm early last month. Mr. Fine's resignation follows Plasti-Kote's recent acquisition by New England Industries, Inc., 120 Wall Street, New York.

Elias Shapiro, executive vice-president of Plasti-Kote, remains as the firm's chief operating officer in Cleveland. Mr. Shapiro, who reported continued expansion of the company's business, sees a bright future for pressure packaged paint in general.

At the same time, appointment of Harold Luce as Midwest zone sales manager was announced. In this newly created post Mr. Luce will cover Minnesota, North Dakota, South Dakota, Wisconsin, Illinois, Indiana, Kentucky, Michigan, Ohio, Iowa, eastern Nebraska, and Kansas.

—★—

Allied Advances Meirowitz

Marvin S. Meirowitz has been advanced to field sales manager for "Genetron" aerosol propellants by General Chemical Division, Allied Chemical Corp., New York, it was announced recently by James P. Farrell, vice-president. With the division for five years as a "Genetron" salesman, Mr. Meirowitz will cover the New York metropolitan area in his new post.

—★—

Charcoal Lighter Paste

An aerosol charcoal lighter in paste form was introduced late in May by Chase Products, Inc., Maywood, Ill. Said to be the first of its kind "Red Fire" paste lighter is claimed to eliminate flash back hazards. The product melts slowly into the charcoal, wood or briquettes, Chase states.

Suggested for use at picnics and other outdoor cooking occasions the product is said to be odorless and clean burning. It may be used also for burning trash and leaves or for igniting rubbish in incinerators, according to Chase.

A 16-ounce can of "Red Fire" paste charcoal lighter retails at 79 cents. Container features a directional spout to prevent dripping.

New first-of-its-kind aerosol charcoal lighter in paste form. Made by Chase Products Inc., Maywood, Ill..

Aluminum Aerosol Can

The development of a four ounce seamless aerosol can was announced last month by Continental

Can Co., New York. As a pressure package, the new aluminum container offers a combination of light weight and strength, small diameter, good appearance and corrosion resistance, according to Continental.

The round, two-piece, extruded can provides a good surface for multi-color wrap around lithography, the manufacturer claims. Interior of the can comes plain or with enamel coating.

Continental suggests the new can for use with insecticides, space deodorants, hair sprays, shave creams, toothpastes, paints, and a number of other specialties. Featuring a standard one inch opening the container accommodates spray, stream or foam type valves, which are crimped to the opening. Bottom end of can is double seamed to the body.

—★—

New Stalfort Line

An aerosol filling line designed to load pharmaceuticals and cosmetics into the smallest containers on the market today has been installed at the John C. Stalfort & Sons, Inc., Baltimore contract packagers.

Capable of handling glass,

Aerosol Room Fresheners have the sweet smell of success!

All across America, the "magic touch of aerosol packaging" has touched off a sales boom for pressure-packed air fresheners and other aerosol household products! In 1958, *aerosol room deodorants alone* accounted for 63 million unit sales . . . and the outlook is for 113 million by 1968.

Similarly, sales of other aerosol household products have practically doubled. Aerosol metal, oven, rug and upholstery cleaners, waxes and water repellants were up from 5.5 million units sold in 1957 to approximately 10 million units one year later.* If *you* have a product in any of these fields —or a related one—you should be considering the advantages of aerosol packaging *right now!*

How General Chemical can help you

To help you get started in aerosol packaging of your household product, General Chemical offers many valuable *free* services. For example, we can give you technical information which will help you determine the proper aerosol propellant for your product, its container and its uses. We can supply you with the latest aerosol market information. We can show you promising new types of aerosol formulations developed in our laboratories. And we can give you information on how contract fillers can help you, from test marketing right through to full commercial production. The fact is, through the use of contract fillers you can get into aerosols quickly and efficiently—*without any outlay on your part for plant, special equipment or personnel!*

New product ideas

As an industry service, General Chemical publishes regular "Genetron" *Aerosol Product Information Bulletins.* These bulletins contain such basic information as: typical aerosol formulations for new products or improvements on existing ones . . . application methods . . . data on stability, flammability, pressures, etc. . . . competitive products. Write for a list of the bulletins presently available.

Why not take advantage of these General Chemical services *now?* Write today to "Genetron" Dept., General Chemical Division, Allied Chemical Corporation.

*Estimated by Market Surveys Dept., General Chemical Division, Allied Chemical Corporation

genetron®

aerosol propellants

putting the "push" in America's finest aerosols

Allied Chemical

GENERAL CHEMICAL DIVISION
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Shown above is the audience at the final session of St. John's University College of Pharmacy's Aerosol Seminar Series held on May 5, 1960 at the university campus in Jamaica, N. Y. Shown at the top right of the photo standing are: L. to R.: Dr. John J. Sciarra, associate professor of Pharmaceutical Chemistry at St. John's and director of the aerosol program; Julius Hauser, administrative assistant to the director, Bureau of Medicine of the Food and Drug Administration, Washington, D. C., the speaker at the final session; and Dr. Francis A. Mina, research associate, Reed and Carnrick, co-director of the program with Dr. Sciarra.

aluminum, stainless steel and steel containers the installation is designed for close tolerance filling of concentrate and propellant. Purging stations for liquified and inert propellants eliminate the possibility of air being trapped in the containers.

Only 30 feet long, compared with other aerosol lines of 200 feet at the Stalfort Pressure-Pak plant, the installation crimps any type of valve and has complete testing and labelling equipment.

—★—

New Aerosol Can

A new type six-ounce aerosol can that its maker claims offers "impressive savings" for its users was announced late in May by Canco Division of American Can Co., New York. The "Snap-Lock" pressure can features "clean" design, stackability for counter or floor display and is adaptable to tamper-proofing.

According to Charles S. Stephens, product manager of non-food containers for the Canco Division, the new can makes it possible to employ a single-shell overcap instead of double-shell caps now in vogue. New type caps will be available from a choice of manufacturers who produce metal and plastic caps especially fashioned to fit Canco's "Snap-Lock" pressure cans, Mr. Stephens said.

In addition to the use of a simpler overcap, the new can eliminates distortion of the seam area—a condition which may invite leakage problems, the Canco spokesman stated. He pointed out that the stacking feature of the new container stemmed from designing the flat-top can with a diameter slightly smaller than that of the can's bottom. Snugger nesting of this sort opens the way for easy self-service selling with resultant larger sales potentials, Mr. Stephens reported.

Aerosols can be made tamperproof by applying a plastic band to seal the beaded overcap to the can. This prevents shoppers from using the aerosol in the store, and also insures against price-cap switching.

The new type container is being produced in a six-ounce size at present, and the Canco Division is equipping itself to produce 12-ounce cans.

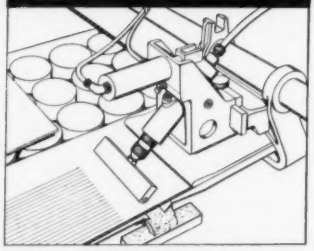
—★—

Propellants in Australia

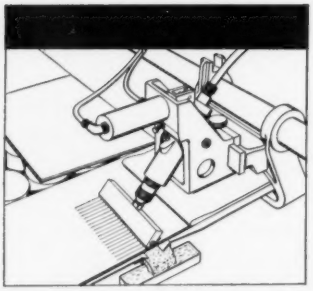
Fluorinated hydrocarbons are among products to be made by a new organization to be formed jointly by Monsanto Chemicals Australia, Ltd. and Consolidated Zinc Pty., Ltd. First producer of fluorinated hydrocarbon propellants in Australia, the new plant will be located at Monsanto's site in Sydney, and is expected to be on stream by mid-1961.

Initially the new company will produce the "Isecon" range of fluorocarbons which have been made for some years in the United Kingdom by Imperial Smelting Corp., another member of the Consolidated Zinc group.

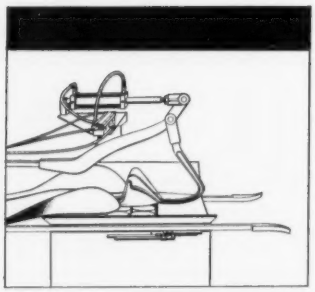
Novel "Snap-Lock" pressure can of Canco Division, American Can Co., New York, permits use of economic single shell overcap, minimizes leakage by seam distortion, features smaller top than bottom for snugger nesting. Plastic band sealing overcap to can prevents product use in stores and priced cap switching. New type container is being produced in six ounce size at present. Canco is equipping itself to produce cans in 12-oz. size.



Skip-gap air cylinder raises applicator at the precise moment the flap reaches the skip-gap position.



Applicator is returned by an air cylinder to the gluing position after the skip-gap. The flap itself re-opens the valve allowing glue to flow.



Kicker arm folds down trailing inner flaps as outer flaps are plowed outward. If no case is present, no "kick" takes place, thus saving air and unnecessary mechanical movements.

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THE STANDARD-KNAPP

GLU-LINE

UPGRADES YOUR GLUER*

* NOT APPLICABLE TO S-K 429 GLUERS BUILT PRIOR TO MARCH 1935

SIMPLEST, STINGIEST, NEATEST SYSTEM FOR GLUING CASES . . . AND IT'S READY NOW

Emhart Manufacturing Company
Portland, Connecticut
Standard-Knapp Packaging Equipment

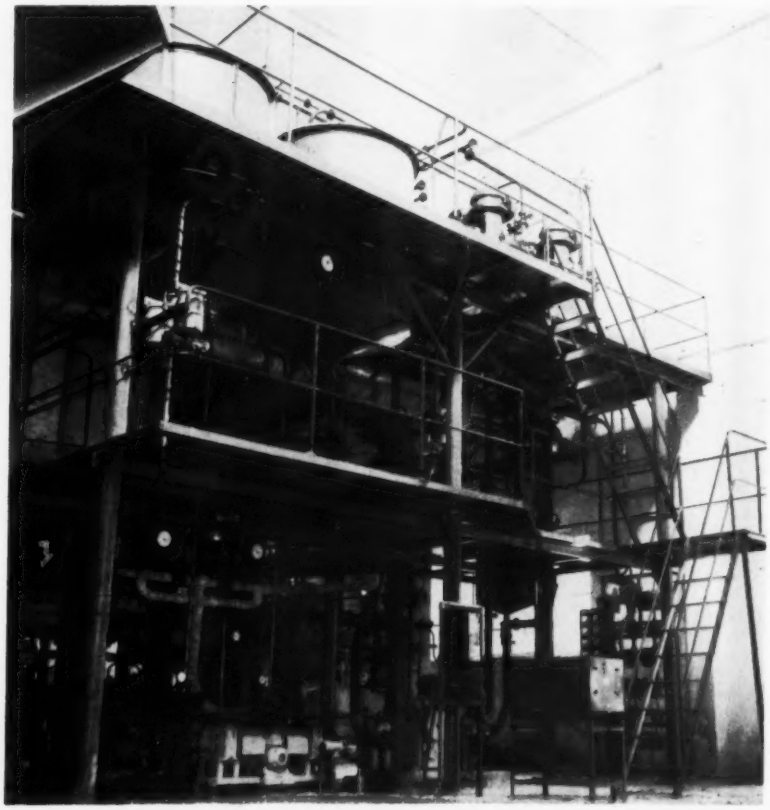
EMHART

Production...

G. MAZZONI S.p.A., BUSTO ARSIZIO, Casella Postale 421 (Italy)

Continuous and Automatic Saponification Plant For Fatty Acids.

Production capacities ranging between 500 and 6,000 Kilograms per hour



General view of the continuous and automatic saponification plant for fatty acids.

Characteristics;

Automatic control of free caustic in soap with an accuracy of ± 0.01 %

Very accurate control of the sodium chloride content in soap from zero to any required value

Maximum percentage of unsaponified saponifiable matter 0.05 %

Utilities required for 1,000 Kgs. of soap 62 — 63 % fatty acids:

Steam at 2-3 Kgs. sq. cm.	:	65-70 Kgs.
Electricity	:	10-12 KWh.
Labor	:	1 man.

OUR MANUFACTURING PROGRAM INCLUDES:

Plants for Cooling and Drying all types of soap
Continuous and Automatic toilet soap lines
Refining vacuum plodders type DUPLEX and TRIPLEX
Automatic mixers and automatic soap cutters

Automatic soap stamping machines for standard and capacity molds

Continuous sulphonating plants and spray driers for synthetic detergents
Continuous fat splitters and continuous fatty acids stills
Plants for general chemical industry

Our technical staff are at your service to help you solve any problem concerning the manufacture of your soap.

Please ask for our technical literature and bulletins.

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Non-Spray Dried Wash Powders

By A. Davidsohn
Haifa, Israel
Part II

Last month, in Part I, Dr. Davidsohn discussed the actual production of detergent, soap-detergent powder mixes for sale in bulk packages. This month he indicates typical formulas for such products.

Formula 1. Heavy duty powder based on AB-sulfonic acid only

	parts
Soda ash, light	50
TSPP, anhydrous	25
AB-sulfonic acid	15
Sodium hypochlorite solution (10-12% active Cl)	2-3
Waterglass (1:2Na_2O:SiO_2) or sodium metasilicate	5
CMC (powdered)	2
Optical brightener	0.04-0.06

Soda ash and TSPP are mixed; the AB-sulfonic acid is then introduced dropwise from a vessel above the mixing tank as shown in Figure 2; the sodium hypochlorite solution is added next, then silicate, CMC, finally the optical bleach. Presence of sodium hypochlorite solution not only aids the color properties of the powder but, being an aqueous solution, it helps to complete the reaction of AB-sulfonic acid with the builders.

This formula may be modified by addition of nonionics. Ethylene oxide or propylene oxide condensation products might be incorporated for controlled foaming or lauric diethanolamide condensate as a foam stabilizer. These surfactants may be added to AB-sulfonic acid prior to mixing with the builders, or separately after AB-sulfonic acid and hypochlorite have been introduced. TSPP may be replaced by sodium tripolyphosphate, but a minimum of soda

ash must be present to ensure dryness of the final product.

Formula 2. Light duty powder based on AB-sulfonic acid

A	parts
TSPP, anhydrous	40
Soda ash	10
Sodium sulfate, light	20
Sodium bicarbonate	10
B	
AB-sulfonic acid	18
C	
Sodium hypochlorite solution (10-12% active Cl)	2-4
D	
Silica, very light (air floated)	1-2
CMC	q.v.
Optical brightener	q.v.

Mix all ingredients in A; add B as described in Formula 1, then add C. Silica is incorporated to expedite drying. Alkalinity of final product may be adjusted by addition of acid sodium pyrophosphate, if required. This basic formula may also be modified.

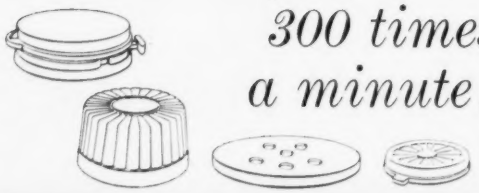
Formula 3. AB-sulfonic acid/fatty acids based powders for soft water

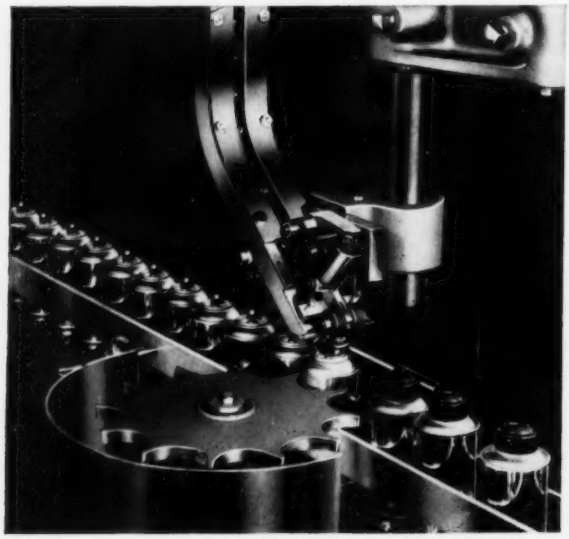
A	parts
Soda ash, light	50
TSPP, anhydrous (or sodium tripolyphosphate)	8
Sodium sulfate, anhydrous, light	18

Shown here is discharging of powder detergent mix from plough mixing installation.

The Cap Fits

300 times a minute!





Closeup view of new Sorter Chute and Chute Escapement on H-O-F Capper. It rolls snap-on caps (up to 300 a minute) with perfect fit.

Now you can average up to 300 perfectly snug metal or plastic closures a minute with the Consolidated H-O-F Capper. That means extra profits—quickly!

An important feature is the escapement mechanism. It automatically holds back your fitment supply and rolls each fitment on carefully and exactly. No container, no cap device.

The H-O-F Capper complete with chute escapement, is equally fast and efficient with *aerosol* containers, odd or conventionally shaped over-caps. Also adaptable for ointment and shoe polish cans and other types of slip-fit closures. Easy changeover from one size container to another.

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Complete line of aerosol tested perfume compounds available for your approval.

Tombarel offers over 123 years of experience plus the most modern methods of laboratory research and product development. Why not let us help give your product new distinction.

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725 Broadway
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IN CHICAGO A. C. DRURY & CO., INC., 219 E. NORTH WATER ST.

B	
Distilled tallow fatty acids (or other high titer f.a.)	15
C	
AB-sulfonic acid	5
D	
Sodium hypochlorite solution (10-12% active Cl)	2-3
E	
CMC, powdered	2
Optical brighteners	0.04-0.05

Mix ingredients in A; melt B and heat to 80°C.; mix B with C; add mixture of B and C to A; add D and complete reaction; finally add E.

Formula 4. AB-sulfonic acid/fatty acids based powder for hard water

	parts
Soda ash, light	50
TSPP, anhydrous or sodium tripolyphosphate	15
Sodium sulfate, anhydrous, light	10
AB-sulfonic acid	15
Distilled fatty acids (high titer)	5
Sodium hypochlorite solution (10-12% active Cl)	2-3
CMC, powdered	2
Optical brightener	0.04-0.06

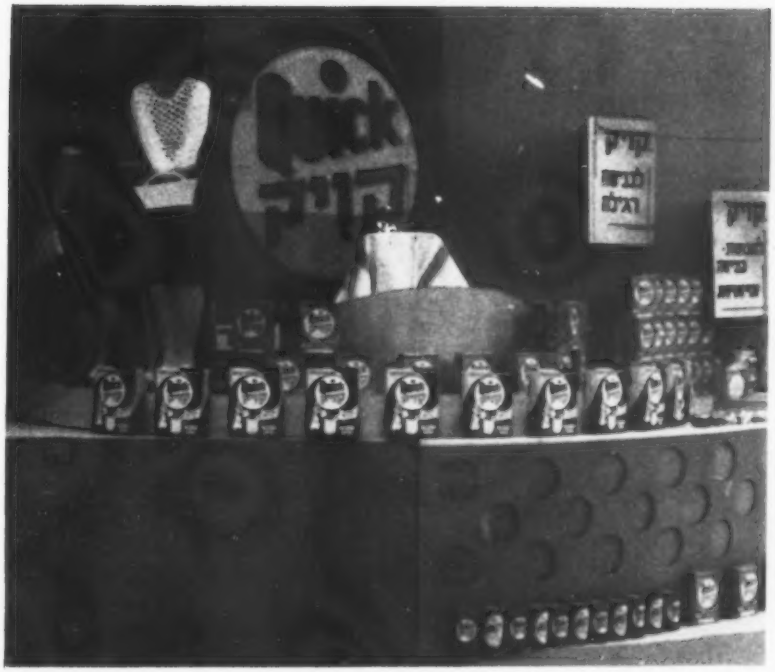
Proceed as in formula 3.

Formula 5. Powder based on fatty acids

A	parts
Soda ash, light	50
TSPP, anhydrous	10
B	
Distilled fatty acids	20
C	
Hot water containing 2-4% caustic soda	8
D	
Sodium hypochlorite solution	2
E	
Sodium metasilicate, preferably anhydrous, otherwise pentahydrate	10

Mix ingredients in A; melt B, heat to 80°C. and add separately with constant stirring to C, thus emulsifying remaining unsaponified acids; emulsion of B and C is incorporated in A accompanied by constant stirring; after saponification is complete add D; and finally E.

If Formula 5 is to yield a high sudsing powder B might consist of seven parts of coconut fatty acids and 13 parts of high titer fatty acids. For powders more active in the hot phase, less or no coconut fatty acids may be used. Generally, the powder takes several hours to "bind-up"; preferably it should be left overnight.



Display of "Quick" washing powder based on SO_3-sulfonated alkyl benzene. Product contains perborate, is produced by dry method described in the article. SO_3 is made from sulfur by Dr. Davidsohn's process discussed in first installment which appeared in May issue of Soap.

If a product of higher fatty acid content is desired, it must be remembered that a lower percentage of builders and higher proportion of fatty acids may yield a paste-like mixture. The paste will solidify on cooling in the mixer, if the latter is fitted with a cooling jacket as described above. If discharged from the mixer and left to cool on the concrete floor the product will have to be broken up and ground.

Obviously, the use of AB-sulfonic greatly facilitates production of washing powders by the dry neutralization method, since it eliminates the need for pre-emulsification of fatty acids in caustic soda solution. The formula for fatty acids alone is included here to give a complete picture of all possible methods.

Use of the dry neutralization method permits incorporation of solvents in detergent powders. (4) Such powders are good heavy duty detergents for heavily soiled greasy working clothes or for kitchen cloths and towels. If a solvent were added to a detergent slurry prior to spray drying it would evaporate in the spraying even if a high boiling fraction were used. Furthermore, the presence of a solvent would constitute a fire and explosion hazard in the spray tower.

Solvents incorporated in detergent powders made by dry neutralization should have a boiling range above 180° C. The finished product should be marketed in containers non-permeable to vapor, such as metal, or in plastic containers or in high density polyethylene bags which may be used as liners for jute or paper sacks.

If the solvent is mixed with the AB-sulfonic acid prior to neutralization with builders the process should preferably be carried out so as to dispense with grinding after mixing. During processing the mixture must be protected

against all contact with electric sparks or flame.

The solvent may be incorporated in the detergent powder by two different methods: The AB-sulfonic acid is mixed with the solvent. This mixture is added to the builders. (Fatty acids are not recommended for incorporation in solvent/detergent combinations because the foaming power of such products would be too low.) A solvent must be chosen which does not react with AB-sulfonic acid. Pine oil, for instance, does react and can be used only if diluted with non-reacting solvents to the point where little or no reaction with AB-sulfonic acid occurs.

As an alternative, the detergent mixture can be neutralized dry as described earlier and the solvent added separately to the finished detergent mixture. A lower percentage of AB-sulfonic acid should be used in this procedure, otherwise the final product may not feel dry enough. A modification of this method calls for premixing of the solvent with a highly absorptive silica product. In this case, a nonionic detergent must be added to the solvent prior to premixing with the silica. The nonionic renders the silica/solvent combination more readily dispersible in the wash liquor thus increasing its efficiency.

The first method can dispense with the use of the rather expensive air-floated silica either entirely or in part. (Products of this type include "Micro-cel" by Johns-Manville, "Santocel" by Monsanto and others.)

If pine oil is added to AB-sulfonic acid it acts as a synergist toward wetting speed. This effect can be demonstrated and measured by the Draves test method. First observed by the author in combinations of pine oil with liquid AB-sulfonic acid or secondary fatty alcohols (5) this synergism is evident also in combinations with powders based on alkaline builders and AB-sulfonic acid.

Formula 6.

	parts
Soda ash, light	60
TSPP, anhydrous	12
Sodium sulfate, anhydrous, light	10
AB-sulfonic acid premixed with aromatic solvents	7
Sodium hypochlorite solution, (10-12% active Cl)	2
Pine oil	2
CMC, powdered	2

High boiling aromatic solvents of low odor are mixed *slowly* with AB-sulfonic acid. The resulting mixture is injected into the mixture of builders through nozzles for proper dispersion. The final product has a slightly fatty, starchy "feel."

Formula 7.

A	parts
Highly absorbent silica	10
Aromatic solvents	15
Pine oil	4
Nonionic, such as ethylene oxide/alkyl phenol condensation products	1

(*Turn to Page* 201)

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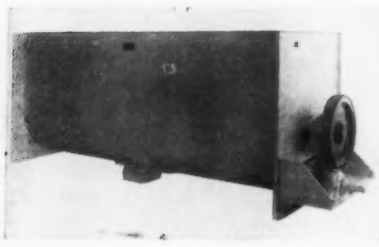

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soap plant observer

By Willis J. Beach
Technical Service Department,
Sugar Beet Products Co.

CERTAIN economies in time and labor accrue from the use of some principles of statistics to various production and laboratory problems, as indicated in this column last month. Even the neophyte can apply fairly safely some statistical shortcuts providing he prepares his data correctly and does not overshoot the mark in making his deductions.

A number of these shortcuts were presented by Frey and Dobie of Bristol-Myers Co. before the Toilet Goods Association. Their paper appeared in the *Proceedings of the Scientific Section* of TGA, No. 20, Dec., 1953. With TGA's kind permission we quote from examples cited in this contributica. Frey and Dobie stress an important aspect in the evaluation of experimental results: one must recognize the existence of variation in data due to chance causes; accept such variation as a natural factor in experimental work; learn to calculate its limits; and decide if they seem reasonable. One must learn to separate deviation due to chance error from that due to assignable causes.

For example, day to day quality control of an emulsion gel may yield an average density of 0.94 with some variation of this average being recorded. After a change in one of the processing variables quality control personnel will collect data on the stock during a few trial runs under the new conditions. Now that a new average is established, the following questions must next be answered: Does the new average indicate a significant change in the product? If so, is the change due

to the modification in process? Or is it possible that, due to the variability of the process itself, further data on the original procedure might have yielded the same average?

When averages differ but little, some doubt may exist whether the change in process is the cause. The question may be resolved by a formal statistical approach using the statistician's yardstick called "standard deviation" to measure the difference between the established average and the new average.

A simpler approach that will give a pretty reliable estimate uses the range or difference between the highest and lowest values: Let us consider the following data from five test runs on stock from the new process: 0.89, 0.95, 0.91, 0.92 and 0.93, giving us an average density of 0.92 = X. The previous average was 0.94. Does the new process lower the density significantly? The difference between the two averages is 0.02 and the range of the five tests runs from 0.89 to 0.95, or 0.06. Set up the following ratio:

$$\frac{X - m}{w} = \frac{0.02}{0.06} = 0.333$$

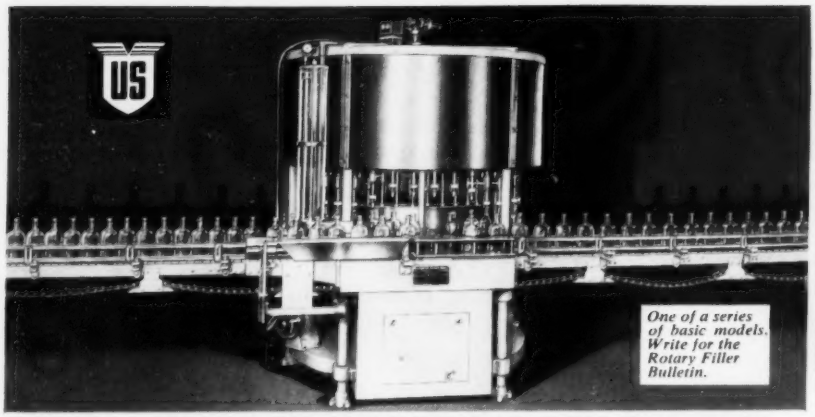
where X is the new average
m is the established average
w is the range of the 5 tests

Next refer to Table I which indicates the probability of obtaining the above ratio by chance with the original process. Reading across from n = 5 we note that 0.333 is next to but smaller than 0.388, the value associated with a probability level of 0.10. This means that the value found will occur *by chance* more often than one time out of ten. Therefore, we can hardly conclude that a significant change in density has taken place. Results of the tests so far can only be suggestive and must await further experimentation.

Another ratio test, useful for comparing two sets of data with one another (instead of one average against another established one), is offered by Frey and Dobie. The development chemist wishes to compare the efficiencies of two different thickening agents in a lotion. He prepares ten laboratory batches with agent A and ten with B under carefully controlled identical conditions of makeup. He measures the viscosity of each batch:

Agent A	Agent B
14	10
15	8
12	9
15	8
9	9
12	12
8	8
14	11
13	10
11	9
$X_1 = 12.3$	$X_2 = 9.4$

On the face of it the chemist



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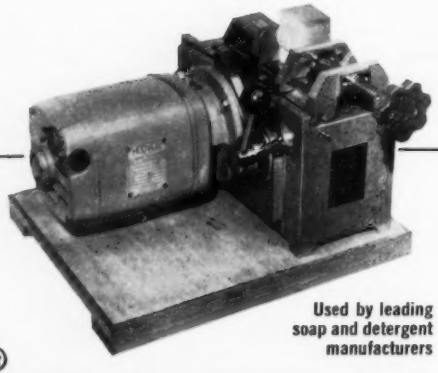

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Table I*.

Table for testing the significance of the deviation of the mean of a small sample (of size n) from some pre-assigned value.

n \ p	0.10	0.05	0.02	0.01	0.002	0.001
2	3.157	6.353	15.910	31.828	159.16	318.31
3	0.885	1.304	2.111	3.008	6.77	9.58
4	.529	0.717	1.023	1.316	2.29	2.85
5	.388	.507	0.685	0.843	1.32	1.58
6	0.312	0.399	0.523	0.628	0.92	1.07
7	.263	.333	.429	.507	.71	0.82
8	.230	.288	.366	.429	.59	.67
9	.205	.255	.322	.374	.50	.57
10	.186	.230	.288	.333	.44	.50
11	0.170	0.210	0.262	0.302	0.40	0.44
12	.158	.194	.241	.277	.36	.40
13	.147	.181	.244	.256	.33	.37
14	.138	.170	.209	.239	.31	.34
15	.131	.160	.197	.224	.29	.32
16	0.124	0.151	0.186	0.212	0.27	0.30
17	.118	.144	.177	.201	.26	.28
18	.113	.137	.168	.191	.24	.26
19	.108	.131	.161	.182	.23	.25
20	.104	.126	.154	.175	.22	.24

This table concerns $\frac{d}{w}$ = $\frac{\text{deviation of sample mean}}{\text{range in sample}}$

* Reproduced with permission from E. Lord, "The Use of Range in Place of Standard Deviation in the t-Test," Biometrika, Vol. 34 (1947), pg. 66.

Table II*.

Table for testing the significance of the difference between the means of two small samples of equal size n

n \ p	0.10	0.05	0.02	0.01	0.002	0.001
2	2.322	3.427	5.553	7.916	17.81	25.23
3	0.974	1.272	1.715	2.093	3.27	4.18
4	.644	0.813	1.047	1.237	1.74	1.99
5	.493	.613	0.772	0.896	1.21	1.35
6	0.405	0.499	0.621	0.714	0.94	1.03
7	.347	.426	.525	.600	.77	0.85
8	.306	.373	.459	.521	.67	.73
9	.275	.334	.409	.464	.59	.64
10	.250	.304	.371	.419	.53	.58
11	0.233	0.280	0.340	0.384	0.48	0.52
12	.214	.260	.315	.355	.44	.48
13	.201	.243	.294	.331	.41	.45
14	.189	.228	.276	.311	.39	.42
15	.179	.216	.261	.293	.36	.39
16	0.170	0.205	0.247	0.278	0.34	0.37
17	.162	.195	.236	.264	.33	.35
18	.155	.187	.225	.252	.31	.34
19	.149	.179	.216	.242	.30	.32
20	.143	.172	.207	.232	.29	.31

This table concerns $\frac{X_1 - X_2}{\frac{1}{2}(w_1 + w_2)}$ = $\frac{\text{difference between means}}{\text{mean of sample ranges}}$

* Reproduced with permission from E. Lord, "The Use of Range in Place of Standard Deviation in the t-Test," Biometrika, Vol. 34 (1947), pg. 66.

might judge that Agent A offers the greater viscosity; but if he wants to be sure and wants a measure of his estimate, he will set up the following ratio:

$$\frac{X_1 - X_2}{\frac{1}{2}(w_1 + w_2)} = \frac{12.3 - 9.4}{\frac{1}{2}(7+4)} = .527$$

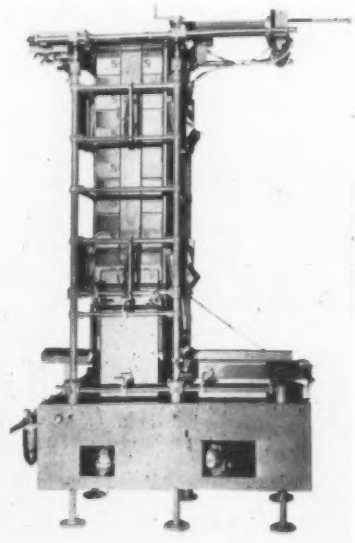
This time, Table II is consulted and we find the nearest value, .53 opposite n = 10 under a probability level of p = 0.002, indicating an occurrence *by chance* of only two in a thousand times. This is so improbable that we can safely conclude that there is a significant difference in the thickening power of the two agents when viscosity is used as a parameter.

It must be clearly understood, say authors Frey and Dobie, that freakish values will affect *range* more than standard deviation, and the effectiveness of the range will suffer accordingly. It is therefore important that the data be surveyed to eliminate strays and gross errors. Rejection and replacement of data can be accomplished by applying Dixon's Q test to the data as described in this column last month.■

Vertical Case Sealer

A vertical compression sealer unit has been introduced recently by Emhart Manufacturing Co., Portland Division, Portland, Conn. Designed to elevate cases and conserve floor space, the unit handles sizes ranging from 20½ inches long, 14½ inches wide and 15 inches high to 10 inches long, 5½ inches wide and 5 inches high.

Designated "Standard-Knapp Type SK677 Vertiseal," the sealer



is supplied with discharge elevations of from eight to 18 feet. It is designed for use with "Standard-Knapp" gluers.

—★—

CSC Offers New Waxes

A new line of synthetic waxes with potential uses in the floor wax and polish formulations has just been announced by Commercial Solvents Corporation, 260 Madison Avenue, New York 16. Known generally as oxazoline waxes, the new products are derived from nitroparaffins.

Two of the six new waxes are currently available in commercial quantities: "TX-1" is a hard, high melting, emulsifiable rosin-like wax, light brown in color and translucent. "TS-254" is hard, medium melting, emulsifiable and cream colored. Said to impart good adhesion, lubricity, and wettability to finished products, oxazoline waxes are expected to find application in polishes, self polishing floor waxes, leather dressings, and a number of other personal and industrial specialties.

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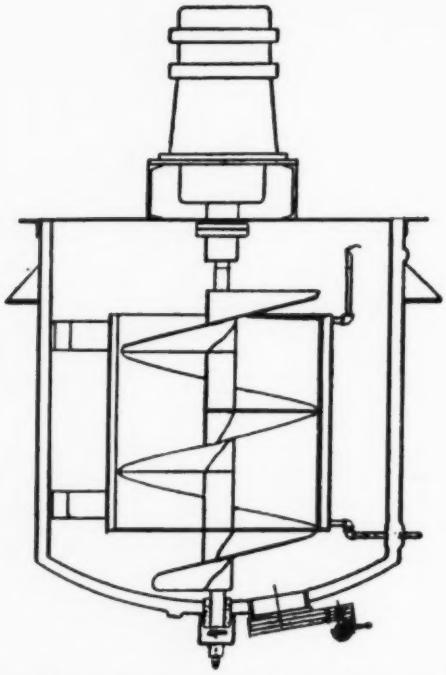

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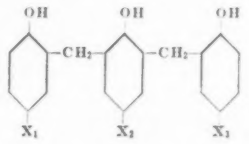
new patents

The data listed below are brief reviews of recent patents. Complete copies may be obtained from the publisher of this magazine: — MacNair-Dorland Co., 254 W. 31st Street, New York 1, N. Y. Remit 50¢ for each copy. For orders received from outside of the United States send $1.00 per copy.

No. 2,926,141. Antiseptic Soap Composition, patented by David J. Beaver, Richmond Heights, Paul J. Stoffel, Florissant, and Roland S. Shumard, Brentwood, Mo., assignors to Monsanto Chemical Co., St. Louis, Mo. Revealed is an antiseptic detergent composition consisting essentially of a detergent soap and 0.5 to 10% by weight based on the detergent soap of a halogenated tris-phenol having the structural formula



where X_1, X_2, and X_3 are halogen atoms selected from the group consisting of chlorine and bromide.

No. 2,929,788. Detergent Compositions Composed of Alkylaryl Sulfonates and N-Alkyl Beta-Aminopropionates, patented by Royce G. Freese and Harold Wittcoff, Minneapolis, assignors to General Mills, Inc., Minneapolis. A detergent composition is claimed comprising a mixture of an N-alkyl β-aminopropionate alkali metal salt, in which the alkyl group contains from 16 to 18 carbon atoms and a dodecylbenzene sulfonate alkali metal salt and in which N-alkyl β-aminopropionate constitutes from 1 to 25% by weight of the combined weight of the alkylaryl sulfonate and the N-alkyl β-aminopropionate, and from 60-80% of an alkali metal polyphosphate.

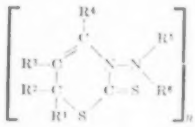
No. 2,926,142. Surface Active Alkyl Benzene Sulfonate Composition and Method of Preparation, patented by Edwin J. Eccles, Winchester, and Robert J. O'Neill, Stoneham, Mass., assignors to Monsanto Chemical Co., St. Louis, Mo. A mixed surface composition is described, comprising the substantially salt-free composition obtained by the sulfur trioxide sulfonation of a mixed hydrocarbon consisting of from about 10 to about 17 weight percent of the intermediate mixed hydrocarbon fraction obtained from the Friedel-Crafts alkylation of benzene with a tetrapropylene, characterized by a distillation range of from about 150° to about 215° C, and 90 to 83 weight percent of dodecylbenzene, prepared by the Friedel-Crafts alkylation of benzene with a tetrapropylene, said sulfur trioxide being diluted with an inert gaseous carrier in a volume ratio of from about 5 to about 15 volumes of carrier per volume of sulfur trioxide and furnished in an amount of from about 1.00 to about 1.05 mole equivalent sulfur trioxide per mole of the mixed sulfonatable hydrocarbons, said sulfonation being carried out between about 40° and about 70° C. for a time of from about 2 to about 6 hours, thereafter neutralizing the mixed hydrocarbon sulfonic acids by introducing into an aqueous alkali metal hydroxide solution in an amount sufficient to effect a pH of the mixed alkali metal hydrocarbon sulfonates of from about 7.5 to about 9, as determined in a 1 percent solution at 25° C.

No. 2,933,451. Process for Producing a Detergent Mixture, patented by Pieter L. Kooijman, Ferdinand A. Doorman, and Cornelis Kortland, all of Amsterdam, Netherlands, assignors to Shell Oil Co. This patent teaches a process for producing a mixture of alkyl aryl sulfonate and secondary alkyl sulfate salt detergents which comprises sulfonating an alkyl aryl hydrocarbon fraction having alkyl groups of at least 8, and not more than 20, carbon atoms, and a sulfonatability of less than 96% due to impurities which are not converted to desirable alkyl aryl sulfonic acid during the sulfonation and reduce the surface activity of the alkyl aryl sulfonate detergent obtained on neutralization of the sulfonation product, extracting the aqueous neutralized sulfonation product in the presence of at least 10%, based on the weight of said alkyl aryl sulfonate, of secondary alkyl sulfate salt detergent, containing 8 to 18 carbon atoms per molecule, with a hydrocarbon solvent for said impurities, said solvent boiling within the range of from about 70° to about 160° C., and being substantially insoluble in the aqueous solution of said secondary alkyl sulfate salt detergent-containing neutralized sulfonation product, whereby removal of impurities is effected and a detergent mixture having improved surface-active properties is obtained.

No. 2,927,052. Process of Producing Oligodynamic Metal Biocides, patented by Zdenek Vaclav Moudry, Northfield, Ill., assignor to United States Movidyn Corp., a corporation of Illinois. The patent teaches the process of producing oligodynamic metal microbicides comprising forming an aqueous solution of a water soluble oligodynamic metal salt containing a colloid stabilizing proportion of an ionizable-halogen-free gelatin having a viscosity of 20-40 millipoises, an isoelectric point of pH 7.8-8.3 and a pH of 3-5 and irradiating said solution for from several seconds to one hour with actinic light having an intensity of at least about 45 milliwatts per square foot, at least 40% of the total radiation lying in the infrared portion of the spectrum, at least 25% of the total radiation lying in the ultraviolet portion of the spectrum and a material portion of the radiation being emitted at 3130-3660 A.U., and thereby producing a stable colloidal dispersion of oligodynamic metal microparticles predominantly smaller than 200 A.U.

No. 2,909,460. 3-Amino-2,3-Dihydro-1,3-Triazine-2-Thiones and Process of Inhibiting Fungus Growth, patented by Van R. Gaertner, Dayton, assignor to Monsanto Chemical Co., St. Louis, Mo. Claimed is 3-anilino-2,3-dihydro-4,6 - diphenyl-6H-1,3-thiazine-2-thione.

Also covered is the method of preventing the growth of fungi which comprises exposing the fungi to a fungitoxic quality of a compound of the formula



in which R^6 is a hydrocarbon radical free of non-benzenoid unsaturation and containing from 1 to 12 carbon atoms and R^1, R^2, R^3 R^4, and R^5 are selected from the class consisting of R^6 and hydrogen and n is a number of from 1 to 2.

No. 2,931,753. Organic Ammonium Salts of Polysaccharide Carboxylic Acids, patented by Ruth M. Chesbro, Archibald M. Erskine, and Bahman K. Shahrokh, Berkeley, Calif.; said Chesbro and said Shahrokh assignors to said Erskine. The invention covers a method of treating a material to protect it against the action of microbials, which comprises applying separately and in succession two reactants in water solution, to form in situ upon said material, the reaction product of said reactants, one of said reactants comprising a solution of a water-soluble, antimicrobiological, organic ammonium compound having in its ammonium group a radical containing a minimum of eight carbon atoms bonded to the nitrogen atom in said group and the other reactant comprising a water-soluble salt of a polysaccharide carboxylic acid, whereby there is precipitated upon said material, a water and oil-insoluble high molecular weight organic ammonium salt of a polysaccharide carboxylic acid.

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Any type of soap commonly used in soap bars will serve in such combination bars. However, a preferred mixture is suggested of approximately equal parts of sodium palm kernel oil soap or sodium coconut oil soap with sodium tallow soap. (British patent 830,238, 1960, Unilever Ltd., Port Sunlight).

A method for preparation of such mixtures of fatty-acyl-amino-methane sulfonates and soap is given. In this process fatty amides are caused to react with from 0.8 to 1.5 molecular proportions of sodium or potassium formaldehyde bisulfite in the presence of free fatty acid and soap. The free fatty acid is subsequently neutralized. (British patent 830,054; 1960, Unilever Ltd.)

—★—

Metal Cleaners

Liquid metal cleaning compounds can be based on a soap made from oleic and/or stearic acid and ammonia. An aqueous solution of the soap is mixed with diatomaceous earth, tripoli, or chalk. Petroleum, benzine, carbontetrachloride, or alcohol can be added. Carboxymethylcellulose may be used as thickener, pine needle oil or oil of turpentine as perfuming agent, and water soluble dyes for color.

If the metal cleaner is to be in paste form, the liquid content is reduced and some very finely ground emery may be added. Tripoli or chrome oxide are suitable coloring agents. *Seifen-Oele-Fette-Wachse,* May 11, 1960, p. 296.

—★—

Sweeping Compounds

Sweeping compounds for solvent sensitive floors may be made by soaking damp wood flour or wood chips in aqueous wax dispersions. Thin aqueous solutions of sorbitol or glycerine can also be used for this purpose. However, floors treated with such compounds must be thoroughly cleaned and dried prior to any applications of self polishing floor waxes. Very dilute water solutions of cellulose derivatives can also be used to make sweeping compounds for solvent sensitive floors.

A preservative such as phenol or cresol should be added as well as water soluble perfume. Compounds must be stored in tightly closed rust free containers. *Seifen-Fette-Oele-Wachse,* May 11, 1960, p. 296.

—★—

New Croda Lanolin

A new, highly refined grade of lanolin designated "Super Corona" has been announced by Croda, Inc., New York. The new lanolin, said to be uniform in color and without the characteristic sheep odor, is being produced in the new Newark plant of Croda. Emulsions with "Super Corona" are pure white, and even at high concentrations, have no odor, the maker states. The new lanolin allows the percentage of lanolin to be increased in a given formulation without increasing the perfume level.

At the same time, Croda announced that their emulsifing agent "Polawax", a creamy wax-like solid, has been used successfully in aerosol products requiring a fast-breaking foam. The product has been used experimentally in waterless hand cleaners in aerosol form and allows the product to be dispensed as a foam in order to cling to the hands—the foam breaking down as soon as the product is rubbed into the skin.

—★—

Liquid Floor Polish

Floor polish of very low viscosity can be formulated from hard ozokerite, five per cent; ceresine, five per cent; and mineral spirits, 90 per cent. While such combinations remain sprayable even at low temperatures, their quality suffers from the absence of hard waxes. *Seifen-Oele-Fette-Wachse,* April 27, 1960, p. 271.

—★—

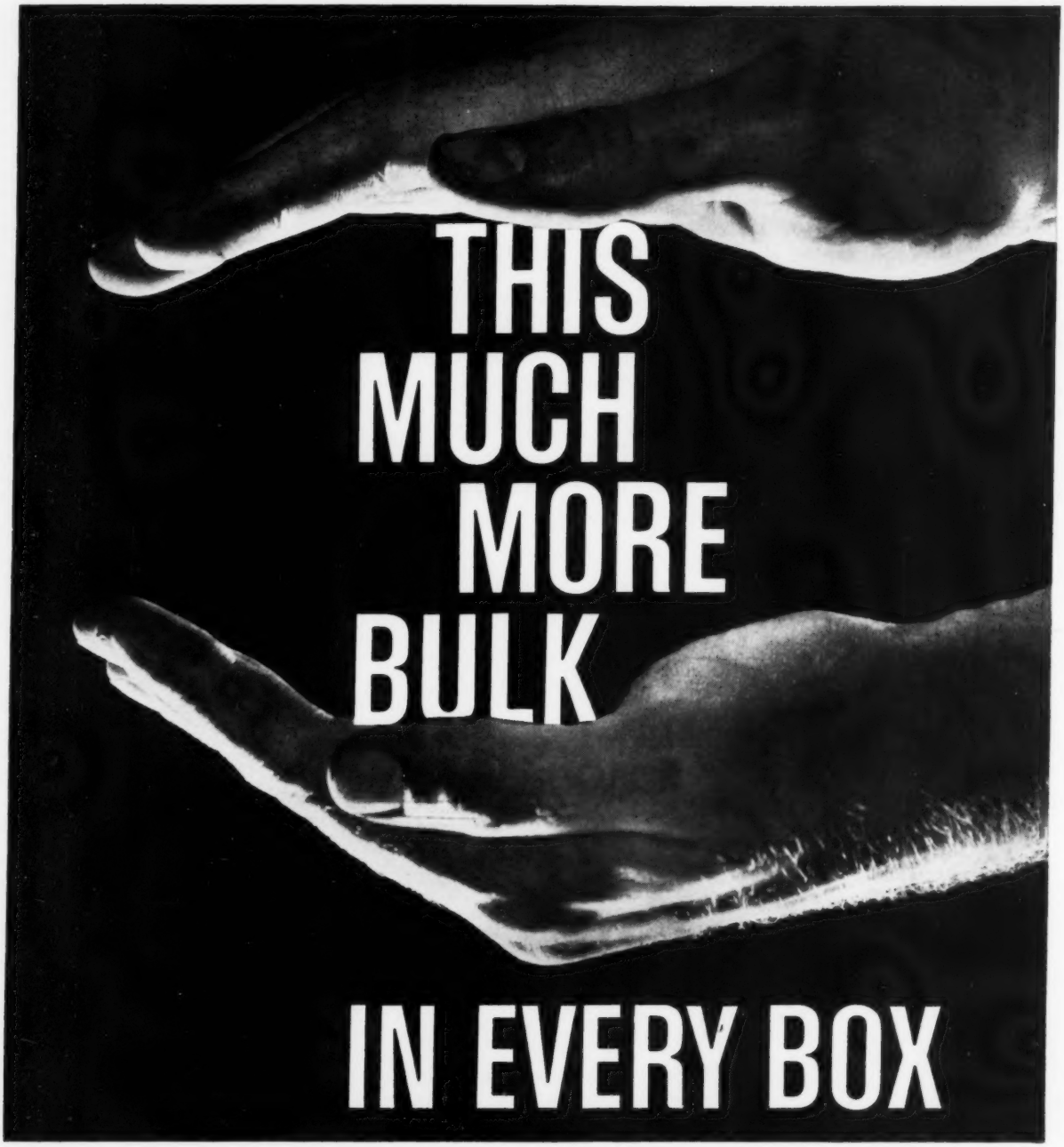
Nopco Issues Brochure

"Nopco Wetting Agents" is the title of a booklet just published by Nopco Chemical Co., 60 Park Place, Newark, N. J. Descriptive and use information is included on some surface active agents which serve as wetting agents only and on others which have been formulated to act as foam boosters or depressants, as rinsability promoters, softening agents, etc.

—★—

New Filling Attachment

A new filling attachment designed to prevent crushing and inaccurate filling of plastic containers was recently developed by MRM Co., 191 Berry St., Brooklyn 11, N. Y. A stainless steel arm of the attachment encircles and grips the neck of any size plastic container preventing the possibility of crushing or distortion under the spring pressure of the filling spout. The attachment is available as optional equipment on new MRM fillers or may be added to present equipment.



BUILD 30% MORE BULK INTO YOUR DETERGENTS WITHOUT INCREASING COST A WHIT Hooker spray-dried phosphates in your detergents give them up to 30% more bulk, depending on the amount you use. This added bulk comes from an air bubble inside each phosphate granule. Consequently, no cost or weight is added.

DISSOLVE FASTER Spray-dried phosphates dissolve two or three times faster than ordinary forms because they have so much more surface area. They flow freely. Their high air content keeps them loose all the time.

99% PURE When you get your spray-dried phosphates from Hooker you can be sure you're getting the highest purity available. They range from 97% to 99% pure.

Choose the one that meets your needs—sodium tripolyphosphate or tetrasodium pyrophosphate. Hooker can supply you with either.

For more information on how to make better detergents by using these phosphates, write to the address below.

You can also get the following in regular density: disodium phosphate, trisodium phosphate, sodium hexametaphosphate, and sodium tripolyphosphate.

HOOKER CHEMICAL CORPORATION

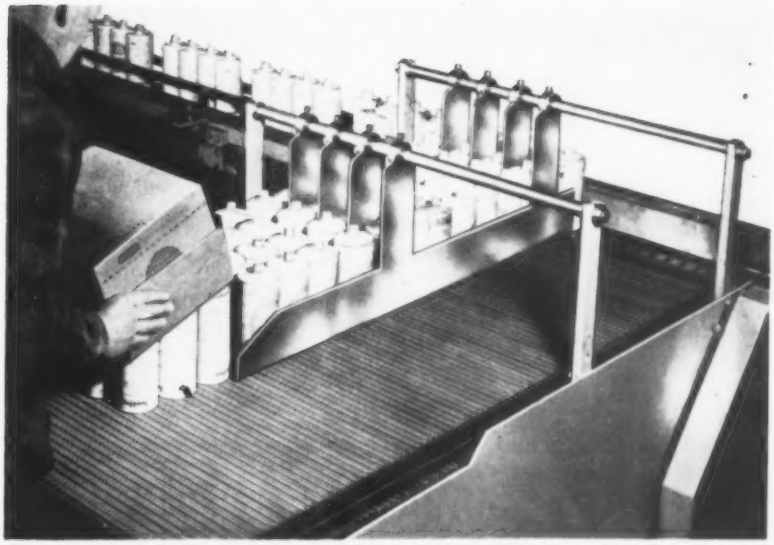
Phosphorus Division, Box 326, Dept. SC-6
Jeffersonville, Indiana. Other Sales Offices:
Chicago, Illinois, New York, N. Y.

HOOKER CHEMICALS PLASTICS

New Container Feeder

A new container feeding machine has just been introduced by U. S. Bottlers Machinery Co., 4015 N. Rockwell Street, Chicago 18. Capable of handling rounds, squares, panels, and ovals in glass, cans or jars at speeds of from 100 to 120 containers per minute which can be stepped up to 150, the machine is adjustable to a wide range of container sizes. Mechanism has a minimum of wearing parts requiring very little maintenance, according to the manufacturer.

A leaflet entitled "U. S. Container Feeder Bulletin" gives descriptive information and a dimensional drawing of the machine. It is available from U. S. Bottlers at the above address.



New container feeding machine of U. S. Bottlers Machinery Co., Chicago, can handle round, square, panel and oval containers of glass, metal or plastic at speeds of from 100 to 120 containers per minute.

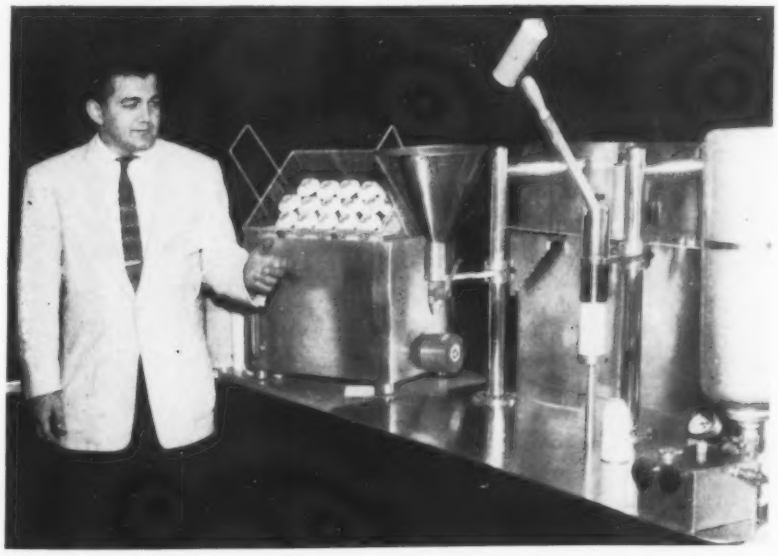
—★—

Short-Run Aerosol Loader

A new short-run aerosol filling unit to sell for under $400 is now available from Pressure Pak, Inc., West Palm Beach, Fla. The unit, designated Model 100-M, is designed primarily for laboratory use and manual loading of short runs of pressure packages. Basic equipment includes automatically controlled filler, crimper for cans and bottles ranging in size from one to 80 ounces, and a combination pressure gasser which can handle both fluorocarbon and nitrogen propellants. Drip, foam, powder, stream, spray, mist and metered valves can be used with Model 1000-M. To supplement basic controls, pressure vacuum testers, leak test equipment, propellant racks are also available from Pressure Pak. Loaders, crimper and gasser are mounted on stainless steel, one-piece base and back, from which small shelf projects. The unit is compact, requiring only eight square feet of shelf space. Construction of the filling unit is stainless steel and aluminum.

Herbert Z. Sokol, president and technical director of Pressure Pak, Inc., has been engaged in aerosol loading and marketing operations for the past seven years. He is assisted in the technical sales department by Ronald Matzuga, who was formerly with Chas. Pfizer & Co., New York, in aerosol development work. Mr. Sokol predicts that the availability of the new equipment will accelerate the already fast growth of aerosol technology through reductions in the cost of doing original research.

Herbert Z. Sokol, president of Pressure Pak, Inc., West Palm Beach, Fla., demonstrates new short-run aerosol loader, which sells for under $400.



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Leak Detection by Vacuum

A leak detecting device for empty glass, metal and plastic containers of sizes ranging from fractional ounces to gallons was announced in May by MRM Co., 191 Berry Street, Brooklyn, N. Y. The tester works on any conveyor fed line using gravity, pressure or piston fillers. Mounted on the intake side of the conveyor over the existing chain a vacuum member grasps and lifts each approaching bottle. If perfect, the bottle will be raised over a gap in the conveyor and discharged on the other side for entry into the filler. Since the device can raise airtight bottles, only, imperfect containers drop through the gap into a receptacle below. Containers ranging in size from fractions of an ounce to gallons can be handled.

Back of hundreds of chemical specialties...

Quality Ingredients and Technical Service

From Colgate-Palmolive

Colgate-Palmolive offers you quality products and technical know-how, backed by more than 150 years of leadership in the soap and synthetic detergent field.

Our enlarged Technical Service Staff stands ready to apply the facilities of Colgate Research to the solution of your soap and detergent application problems.

For Information: write to our Associated Products Division.

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News...

IN YOUR IMPROVED PRODUCTS . . .

Jefferson Propylene Oxide and Propylene Glycols attend a housewarming

Do you suppose any of these housewarmers have given a thought to propylene oxide or propylene glycols? Very likely not. But this highly active oxide and its derivatives are contributing greatly to their comforts and enjoyment . . . in the polyurethane cushioning, reinforced plastic chairs, upholstery and clothing, and gift wrappings. And of course, propylene glycol, U. S. P. grade, helps complete the scene in food and beverage flavorings, as a humectant in cigarettes, and an emollient in milady's cosmetics.

Jefferson can provide high quality propylene oxide and propylene glycols in any quantity you desire, as well as helpful technical services in their many applications. Of particular interest to you may be our technical bulletin, "Propylene Oxide." For your free copy, write Jefferson Chemical Company, Inc., 1121 Walker Avenue, P. O. Box 303, Houston 1, Texas.

Ethylene and Propylene Oxides, Glycols, Dichlorides, Carbonates
SURFONIC® Surface-Active Agents • Ethanolamines • Morpholine
N-Alkyl Morpholines • Polyethylene and Polypropylene Glycols
Piperazine • Piperazine Salts • Nonyl Phenol • Caustic Soda
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JEFFERSON CHEMICALS

016

NEWS

Colgate Advances Apperson

Lester D. Apperson has been named director of research for the toilet articles division of Colgate-

Lester D. Apperson

Palmolive Co., New York, it was announced in May by C. Guy Grace, vice-president and general manager of the division.

Manager of skin and oral products research since 1957, Dr. Apperson is now responsible for all scientific programs at the Jersey City laboratories, directed toward development of new products or improvement of established products for the division.

Dr. Apperson joined Colgate in 1940 as a chemist in toilet articles research. Later he served in various supervisory capacities.

—★—

Am. Home Names Two Execs

William F. Laporte was elected executive vice-president and Kenneth A. Bonham vice-president of American Home Products Corp., it was announced recently by Alvin Brush, chairman.

With American Home Products since 1938 Mr. Laporte was elected vice-president and a director in 1957. He had been president of Whitehall Pharmacal, a subsidiary of American Home Products since 1948.

Mr. Bonham became president of Whitehall in 1957. For four years prior to that he had been assistant to Walter F. Silbersack, president of American Home Products Corp.

—★—

Dunn Joins Vestal

Robert W. Dunn has joined Vestal, Inc., St. Louis, chemical specialties firm, as sales promotion and advertising manager, it was announced late in May. Prior to going with Vestal, Mr. Dunn was sales manager for Continental Chemical Co., Cleveland. A graduate of Western Reserve University, he has been in the sanitation and floor maintenance field for over 15 years.

—★—

CSMA Golf Sept. 20

The annual mid-western golf tournament of the Chemical Specialties Manufacturers Association will be held Tuesday, September 20 at the Medinah Country Club, Medinah, Ill., a suburb of Chicago.

The tournament will be in charge of a committee headed by Charles Allderdice, The Bell Co. and Robert Svendsen of the Chase Products Co. Notices and entry blanks for the tournament will be sent out from the CSMA office late this month. Many CSMA golfers from the east are already planning to attend the mid-west tournament.

The annual eastern CSMA tournament was held June 16 at the Knollwood Country Club, White Plains, N. Y. and was attended by many players from the mid-west. A total of 150 members and guests played golf and an additional 40 members attended the evening dinner and presentation of prizes. Fred Lodes, CSMA treasurer, was chairman of the committee handling the tournament. Full details of prize winners will be published next month.

Cowles Names Osborne

John H. Osborne has been named by Cowles Chemical Co., Cleveland, to the newly created

John H. Osborne

position of field sales manager, it was announced in May by W. J. Schleicher, Cowles laundry products department manager. In his new position Mr. Osborne reports to Ray G. Johnson, sales manager. He will work directly with divisional sales managers on promotion and sales of Cowles' line of laundry products, particularly sours and starches.

Mr. Osborne's previous associations include two years with Dow Chemical Co., Carman-Philadelphia, and Carman Supply-Pittsburgh, where he was manager.

—★—

New Fuld Catalog

Descriptive and price information on a host of chemical specialties is assembled in the catalog of Fuld Bros., Inc., 702 South Wolfe Street, Baltimore 31. The 84-page brochure is entitled "Sanitary Chemicals and Maintenance Products." In eight sections are listed: liquid cleaning compounds, floor protective coatings, aerosols, disinfectants, deodorants, hand soaps, insecticides, and miscellaneous chemical specialties.

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BUILDS BETTER PRODUCTS

ABS-99

dishwashing liquids

dry detergent powders

emulsion cleaners

PILOT ABS-99 builds better end products because ABS-99 *is* a better product to start with. ABS-99 *is* the highest dodecyl benzene sulfonic concentrate commercially available: 98% concentrated with extra activity—14% more active ingredient than ordinary 88% pure sulfonics.

ABS-99 is purer. *So pure, in fact, that it may be kept in plain steel containers!*

Pilot ABS-99 offers greater compatibility with oils and other organic substances; it prevents precipitation because of its low sulfate content, lowest of any similar material on the market.

The uniqueness of this new standard of purity is a result of Pilot's *cold processing:* built in are high detergency and foaming character—stabilized are its light color, viscosity and low odor. You'll save, additionally, on perfuming.

Pilot ABS-99 adds greater flexibility to your detergent formulations, for it is the basic building block for all sulfonic detergent products. So, for superior products—start with the best. Write for technical literature and samples right now.

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Soap Sales Reverse Downward Trend

TOTAL combined synthetic detergent and soap sales made a 10.9 per cent increase in tonnage in the first quarter of this year over last year's corresponding period. For the first time in a number of years soap sales have contributed to this combined market expension. Sales of synthetic detergents have increased 12.7 per cent, soap sales 5.6 per cent since the first quarter, 1959, according to the sales census just issued by the Association of American Soap and Glycerine Producers. Figures are collated from reports by 58 manufacturers participating in the census.

Setting a new record, the combined soap and detergent sales in the first three months of 1960 rose to 1,081,873,000 pounds valued at $275,873,000 from 975,294,000 pounds and $249,417,000 in 1959. Of the total tonnage sold, synthetic detergents accounted for 76.3 per cent or 825,851,000 pounds valued at $201,029,000. This compares with 732,896,000 pounds valued at $179,144,000 sold in the first quarter of last year.

The steep rise of liquid syndet sales continues: 161,784,000 pounds valued at $54,765,000 sold in the first quarter of 1960 represent a 41.3 per cent increase in tonnage and 25.2 per cent increase in value over the 1959 period. The solid synthetic detergents market climbed to 664,067,000 pounds and $146,264,000, a 7.4 per cent rise in tonnage and 8.0 per cent rise in dollar value over the first quarter of 1959. Less than five per cent of this total was sold in bulk.

Total soap sales increased to 256,022,000 pounds valued at $74,844,000 from 242,398,000 pounds and $70,273,000 reported for last year's first quarter. This represents a 5.6 per cent growth in tonnage and 6.5 per cent rise in value. As in previous years, toilet bars accounted for about half of total soap tonnage sold: 131,067,000 pounds, up 9.8 per cent from figure reported for first three months of 1959.

An element of surprise has entered the soap picture with a 27.4 per cent increase in tonnage sales of yellow and other than white laundry bars to 14,503,000 pounds. A 9.8 per cent rise is reported in bulk sales of soap chips and flakes, which amounted to 20,485,000 pounds in the quarter under review.

Liquid soap sales showed an increase of 16.5 per cent over the first quarter of last year, amounting to 7,056,000 pounds. The packaged liquid soap shampoo market soared 100 per cent to 176,000 pounds in the face of 14.8 per cent drop in liquid synthetic shampoo sales, which amounted to 3,048,000

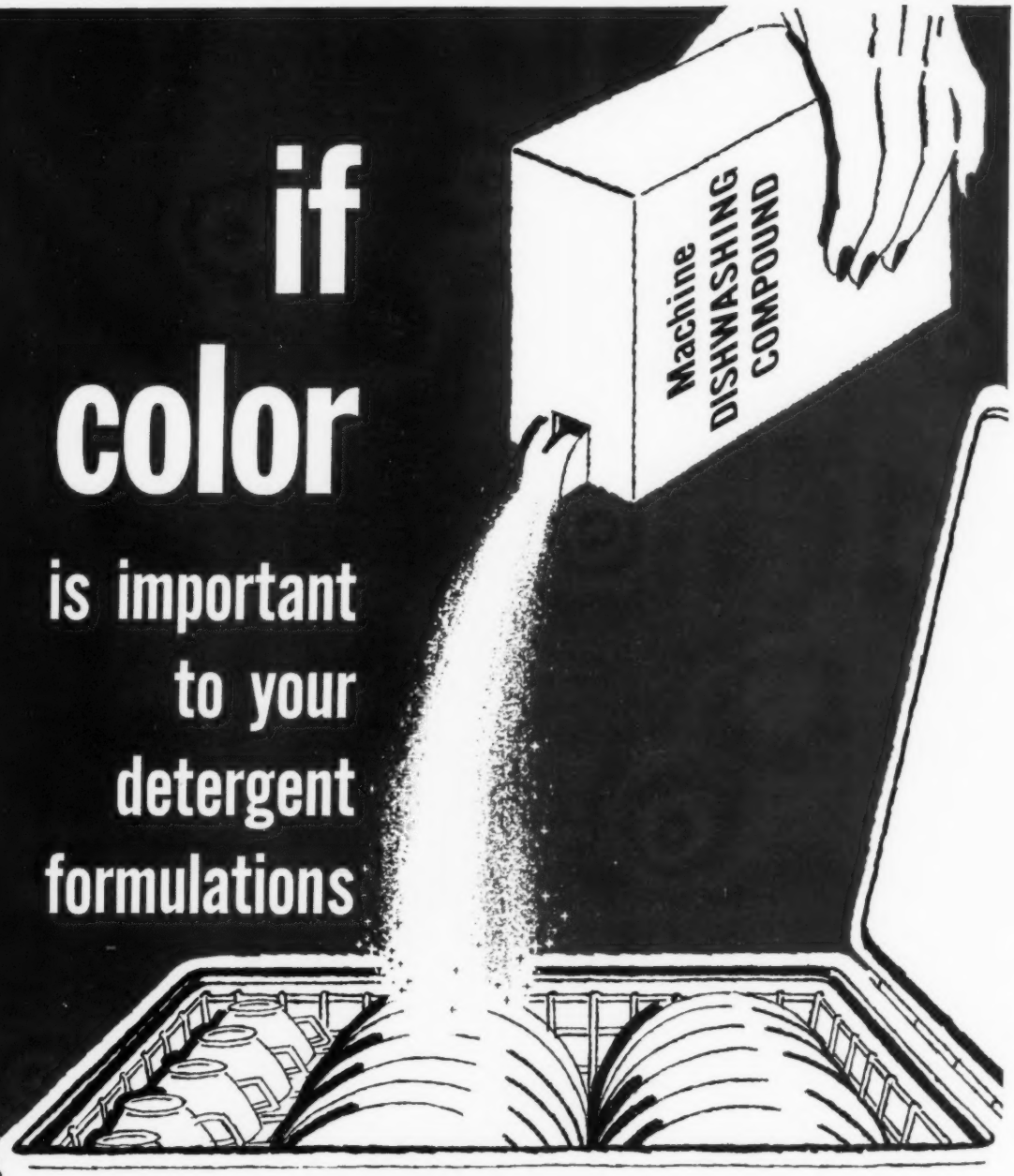
Scouring cleanser sales dropped to 96,638,000 pounds valued at $12,774,000 from 100,880,000 pounds and $14,167,000 in the first quarter of last year. This represents a decrease of 4.2 per cent in tonnage and 9.8 per cent in dollar value. Totals shown in the accompanying table do not include these products.

Detergent and Soap Sales in First Quarter 1960 - 1959

	Thousands of pounds		Thousands of dollars	
	1960	1959	1960	1959
Detergents, solid	664,067	618,400	146,264	135,389
Detergents, liquid	161,784	114,496	54,765	43,755
Total	825,851	732,896	201,029	179,144
Detergents, solid, other than shampoo, pkgd.	631,497	584,930	139,775	128,802
Detergents, solid, other than shampoo, bulk	29,045	30,711	4,348	4,532
Detergents, liquid, other than shampoo, pkgd.	18,287*	12,631*	49,551	37,554
Detergents, liquid, other than shampoo, bulk	1,555*	1,234*	1,532	1,519
Detergent shampoos, liquid	3,048	3,576	3,682	4,682
Detergent shampoos, solid	3,525	2,759	2,141	2,055
Soaps, other than liquid	248,966	236,342	73,458	69,036
Liquid soaps	7,056	6,056	1,386	1,237
Total	256,022	242,398	74,844	70,273
Bar toilet soaps**	131,067	119,412	47,486	42,572
Laundry bars, yellow and other than white	14,503	11,380	1,192	1,183
Laundry bars, white	23,999	24,637	5,133	5,495
Soap chips and flakes, pkgd.	6,363	6,754	2,141	2,318
Soap chips and flakes, bulk	20,485	18,657	1,987	2,048
Soap, granulated, sprayed, pkgd.***	29,738	28,660	8,906	8,756
Soap, granulated, sprayed, bulk***	13,542	16,521	1,488	1,887
Hand paste and powder, incl. waterless hand cleaners	1,973	2,166	395	373
Paste & jelly soaps, potash & other	2,358	3,054	306	434
Shaving soap (stick, powder, cake)	512	542	324	342
Shaving cream (tube, jar, aerosol, soapless)	4,202	4,296	4,056	3,580
Soap shampoo, liquid, pkgd.	22*	11*	63	48
Soap, liquid, other than pkgd. shampoo	860*	746*	1,323	1,189
Miscellaneous or other soaps, incl. shampoos (creams, jellies, pastes, powders, etc.)	233	263	44	48

*expressed in thousands of gallons.
**includes all toilet bars, mechanics, synthetic, medicated, etc.
***includes washing powder.

if color is important to your detergent formulations



use DRYMET®

(COWLES ANHYDROUS SODIUM METASILICATE)

It's whiter, cleaner, tints easier — more uniformly, dissolves fast.

Cowles

CHEMICAL COMPANY

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Geigy Names Westmoreland

Geigy Agricultural Chemicals Division of Geigy Chemical Corp., Ardsley, N. Y., recently appointed William G. Westmoreland as sales representative in North and South Carolina, eastern Tennessee and northern Georgia.

William G. Westmoreland

Prior to joining Geigy, Mr. Westmoreland was agronomy specialist in weed activities with the North Carolina Extension Service. He holds a Master of Science degree in agronomy from N. C. State College, is active in the Southern Weed Conference and in the Weed Society of America.

—★—

New Detergent Meter

Accurate, fast, and continuous monitoring of detergent solution strength at reasonable cost is claimed for "Tab 500", a new detergent meter offered by Almo Laboratories Co., 424 Madison Avenue, New York.

Overall sensitivity of the device is claimed to be equal to modern electronic units and five times more accurate than detergent meters previously available. This is accomplished through use of a new scale multiplier system developed by Almo and applied for the first time in solution measuring equipment, according to the manufacturer.

Used with hand feeding or hydraulic dispensing methods, "Tab 500" is said to reduce detergent waste and improve detergent performance. Installation cost is said to be low and servicing problems minimized, since no mechanism or complicated electronic circuits are involved. A new ball-tipped bright red indicator ensures easy readability. The unit is suggested for use in schools, hospitals, and institutions.

—★—

Beaux Joins Verley

Albert Verley & Co., Linden, New Jersey, essential oil house, announced early this month that Edouard Beaux has been appointed chief perfumer of Aromescence, Inc., Paris, France, a Verley subsidiary. The appointment was announced by Edouard Baumann, director of Verley's European operations. M. Beaux was previously associated with Bourjois Chanel in Paris.

Both Mr. Baumann and Mr. Beaux attended a recent Verley sales meeting held at the Carteret Hotel, Elizabeth, N.J. It was attended by the firm's executive staff and sales personnel from all offices.

—★—

Johnson Appoints Three

Paul W. Linton was appointed controller last month of the domestic operations of S. C. Johnson & Son, Inc., Racine, Wis. Mr. Linton, who had been assistant to the president, has been with the company since 1947. He is succeeded by John Richmond, formerly assistant to the vice-president of the household products division. Also appointed was John Vaughan, as credit office manager. He had been credit manager.

Cockeram to Acme Shellac

Herbert S. Cockeram has joined Acme Shellac Products Co., Newark, N. J., as research director,

Herbert S. Cockeram

it was announced last month. Prior to his recent appointment he was associated for many years with Gillespie-Rogers-Pyatt Co., New York, where he served as assistant chief chemist and most recently as head of research.

In his new post, Mr. Cockeram will work closely with the sales department headed by Howard W. Kelting, vice-president in charge of sales, to provide service, and information on shellac.

—★—

Oronite Expands Polybutene

Oronite Chemical Co., San Francisco, announced last month that it will spend $3,400,000 to more than double its capacity to produce polybutene. Facilities are expected to be on stream in 1961. Polybutene is used in the lubricating oil additives field, in adhesives, rubber, and other industries.

New detergent meter of Almo Laboratories Co., New York, is claimed to provide accurate, fast and continuous monitoring of detergent solution strength. Unit, tradenamed "Tab 500," may be used with hand feeding or hydraulic dispensing methods.

Another new development using

B.F.Goodrich Chemical *raw materials*

McNess Waterless Hand Cleaner made with Carbopol 934 by Furst-McNess Company, Freeport, Ill., is being sold to farmers, mechanics, and householders. B.F.Goodrich Chemical Company supplies the Carbopol 934.

New waterless hand cleaner is emulsified with Carbopol 934

This cream-type waterless hand cleaner employs Carbopol 934 water-soluble resin to blend a number of ingredients with water. It will remove grease and grime—even tar or paint—and leave hands feeling soft and smooth. Since this cleaner may be used in areas where temperatures are high—or cold, resistance provided by Carbopol to viscosity changes or emulsion breakdown is important.

The manufacturer cites other advantages of Carbopol too: the excellent suspending and emulsifying properties allow development of a quick breaking emulsion with good stability. Viscosity can be high with low concentration—and there is no rubbery feel. The wide choice of neutralizing agents provides versatility of formulation. Finally, the ease of processing cold simplifies manufacturing problems and increases production.

Here's another way Carbopol 934 is improving a product—or opening new markets. To get more information or samples, write Dept. JD-3, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

Carbopol
Water-Soluble Resins

B.F.Goodrich Chemical Company
a division of The B.F.Goodrich Company

B.F.Goodrich GEON vinyls • HYCAR rubber and latex • GOOD-RITE chemicals and plasticizers

Kraner Joins Kessler

Karl T. Kraner has been appointed marketing manager for Kessler Chemical Co., Philadelphia

Karl T. Kraner

manufacturer and marketer of organic surface active agents and other "esters for industry," it was announced recently. In his new position Mr. Kraner is in charge of all sales and sales development activities of the firm.

Mr. Kraner's previous associations include Atlas Powder Co., where he served for 12 years in sales and marketing capacities.

—★—

Bixon Expands Line

Expansion of its line of floor maintenance products was announced recently by Bixon Chemical Corp., 1163 Southern Blvd., New York 59. Two gym finishes, one a heavy duty finish containing 54% solids, the other a "regular" finish with 44% solids, and "Gym-Mate" for removing rubber burns and cleaning gym floors have been added to the line. "Roxite #40," a fast drying (30-40 minute) seal of 32% solids, and "Pen-A-Trate Seal," a penetrating type seal of 29% solids content which dries in 12 to 20 hours, are also new.

Other new Bixon products include "Mint Disinfectant," "Drive Off" all-purpose degreaser, and "Wax-N-Rez #810." "Wax-N-Rez" is a floor polish that combines polymer resins fortified with carnauba wax.

Two other new Bixon products are a floor cleaner and wax stripper, "Flash #150," and a concentrated window cleaner that contains silicone. "Flash #150" is a soap based stripper for removing light and heavy soil, as well as rubber burn marks from floors and walls.

—★—

Rapp Joins Fuld Brothers

Appointment of Bert Rapp as sales representative in its southern territory replacing Robert Levin was announced last month by Fuld Brothers, Inc., Baltimore. Mr. Rapp, who at one time operated Thruway Sanitary Supply Co. in Tarrytown, N. Y., earlier had been with Columbus-Dixon Floor Machine Co. and Ponselle Floor Machine Co., both New York. In addition he was for several years a sanitary supply salesman.

Before taking over his new territory, Mr. Rapp spent several weeks at the plant of Fuld Brothers in Baltimore familiarizing himself with the firm's line of sanitation and maintenance chemical specialties sold through distributors.

—★—

Polak Elects Preiser

Marvin F. Preiser was elected assistant vice-president in charge of production for Polak's Frutal Works, Inc., Middletown, N. Y., it was announced late last month. Mr. Preiser has been associated with the firm's flavor and production departments for the past fourteen years.

Marvin F. Preiser

Foley to Dragoco

William G. Foley joined Dragoco, Inc., New York fragrance and flavor house, early this month

William G. Foley

as vice-president. Mr. Foley's appointment was announced by Henry G. Gribou, executive vice-president of the firm, which is the American associate of Dragoco, Gerberding & Co., Holzminden, Germany.

Mr. Foley comes to Dragoco from Firmenich & Co., where he had been for the past 19 years. In his new position he will make his headquarters at the Dragoco offices located at 250 West Broadway, New York.

—★—

Lehn & Fink Leaves McCann

Lehn & Fink Products Corp. announced that it will sever its 15 year association with McCann-Erickson, Inc., advertising agency, effective Sept. 1. A number of brands are involved, including "Lysol" disinfectant. The division is said to bill more than $1,000,000 a year.

—★—

Harold Pile of Fels Dies

Harold G. Pile, 76, retired secretary and director of purchases of Fels & Co., Philadelphia soap and detergent firm, died May 28.

Mr. Pile, retired last October after 56 years with Fels, would have been 77 years old on June 3. He is survived by his wife, Florence Pile; a son, Wilson H.; a daughter, Mrs. Robert S. Judd; and seven grandchildren.

Give her the detergent she wants . . .

Custom-blend with TERGITOL Nonionics

To be certain that the products she buys are *yours*, custom-blend your detergents with TERGITOL nonionics. The product that outcleans and outshines competition is the one she'll favor; and TERGITOL nonionics can give your detergent the properties that fill all her exacting demands.

From CARBIDE you can obtain nonionics with properties ranging from complete oil solubility to complete water solubility. Also you can obtain information on blending these nonionics to give you the precise properties you want for your specialty products.

Here are two nonionics that should be of particular value to you—

TERGITOL NPX—a nonyl phenyl polyethylene glycol ether containing 10.5 moles of ethylene oxide, is ideal for the base of your all-purpose detergents and wetting agents. Its cloud point is in the 60 to 65°C. range, and it is compatible with soaps and other surfactants. TERGITOL NPX is soluble in many alcohols, ketones, glycols, glycol-ethers, and esters; and its stability is not affected by acids, bases, or salts.

TERGITOL TP-9—with 9 moles of ethylene oxide and a cloud point in the 51 to 56°C. range, is similar to NPX in its usefulness, and is designed for use in water at less than 125°F.

The CARBIDE Technical Representative in your area will be happy to discuss your special requirements with you. Give him a call and see what a customized formula can do for your products. Or write: Union Carbide Chemicals Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, New York.

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UNION CARBIDE CHEMICALS COMPANY

UNION CARBIDE

Welch D&O Salesman

Appointment of John M. Welch as sales representative in the Los Angeles branch office has just

John M. Welch

been announced by Dodge & Olcott, Inc., New York essential oil and aromatics house.

Prior to his appointment Mr. Welch spent two weeks in New York participating in a D & O sales training program. Before joining D & O he was employed as chemist by Eastman Kodak Co. and Mobil Oil Co.

—★—

Olin Marketing Director

Arthur T. Safford has been named to the newly created post of director of marketing for Olin Mathieson Chemical Corp., New York, it was announced last month by D. W. Drummond, corporate vice-president of marketing.

Prior to his recent appointment Mr. Safford was division vice-president for marketing with Olin's packaging division. He first went with the firm as a consultant in 1950 having previously served as executive vice-president of Plax Corp. In his new post he reports to Mr. Drummond.

Arthur T. Safford

A graduate of Williams College, Mr. Safford took an advanced degree at Harvard Law School and is a member of the Connecticut Bar Association.

—★—

Victor Advances Wilson

Kenneth A. Wilson has been named advertising manager of Victor Chemical Works, Chicago, recently merged division of Stauffer Chemical Co., New York, it was announced late in May by M. R. Stanley, Victor vice-president.

Mr. Wilson joined Victor's advertising department in 1957. Previously he had been advertising manager at Illinois Baking Corp.

News of Mr. Wilson's advancement came shortly after Elwood M. Myers, former director of advertising for Victor, had been named to the newly created post of director of advertising for Stauffer Chemical Co.

—★—

Gen. Chemical Expands Lab

General Chemical Division of Allied Chemical Corp. is expanding its research center at Morristown, N. J., it was announced in May. Expected to double the division's laboratory facilities, the addition is to be completed in the last quarter of 1961, when the center will accommodate almost 500 research scientists and supporting personnel, according to Frank J. French, division president.

General Chemical's research program is concerned with fluorine chemicals, petrochemicals, agricultural chemical specialties, basic chemicals, and many other facets of the chemical industries. Under the new program facilities are being enlarged for doing original investigations, technical service work, pilot-plant operations as well as greenhouses for agricultural chemical research.

Ultra Advances Two

Two changes in the sales department of Ultra Chemical Works, Inc., Paterson, N. J., subsidiary of

Paul J. Ketrick

Witco Chemical Co., New York, were announced recently by Richard M. Young, Ultra sales manager.

Paul J. Ketrick, formerly product sales manager of Ultra's industrial chemical division, has been advanced to the position of district sales manager, with headquarters in Chicago. He is now responsible for sales of the firm's industrial chemical line as well as its packaged detergents in Illinois, Michigan, Wisconsin, Minnesota, Missouri, Ohio, West Virginia, Kentucky and Indiana.

Robert E. Ritter, formerly a member of Ultra's sales staff in the New York area, has been named to succeed Mr. Ketrick. In his new post, Mr. Ritter is in

Robert E. Ritter

ETHYL ALCOHOL

You can get every formula the government approves . . . from U.S.I. Package sizes range from 10,000-gallon tankcars to one-gallon cans. Delivered fast from U.S.I. denaturing plants, warehouses and distribution points throughout the country.

- ▶ Specially Denatured Alcohol — Anhydrous and 190 proof, all formulas.
- ▶ Proprietary Solvent SOLOX® — Anhydrous and Regular.
- ▶ Completely Denatured Alcohol — for industrial use and antifreeze, both formulas anhydrous and regular.
- ▶ Pure Ethyl Alcohol—U.S.P. 190 proof and N.F. Absolute, tax-free and tax-paid.

ETHYL ETHER

You can order U.S.P. Absolute A.C.S., and Technical Refined grades from U.S.I. Shipments from the Tuscola, Ill. plant range from five-gallon drums to 8,000-gallon tankcars. Drums are stocked conveniently at U.S.I. warehouses across the nation.

CHLORINE CAUSTIC SODA H_2SO_4

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AMMONIA

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in Principal Cities

charge of sales and merchandising of Ultra bulk synthetic detergents. His offices are at Ultra's headquarters in Paterson, N. J. Mr. Ritter joined the firm in 1955.

Mr. Ketrick, who will make his headquarters at 75 E. Wacker Drive, Chicago, joined Ultra in 1952. He is a member of the Salesmen's Association of the American Chemical Industry and is chairman of the membership committee of the Detergent and Cleaning Compounds Division of the Chemical Specialties Manufacturers Assn.

—★—

Turco Germicidal Cleaner

Announcement of "Zeal," a germicidal cleaner, which also acts as a sanitizer and deodorizer for floors, walls, woodwork, etc., was made this month by Turco Products, Inc., Wilmington, Calif. A concentrated liquid, the product may be used in cold or hot water, and is effective in water of up to 550 ppm hardness, the maker claims. "Zeal" has a phenol coefficient of 20 and is effective as a germicide for *Staphylococcus aureus* and *Salmonella choloraesuis*. Active ingredients include a quaternary disinfectant and ethanol.

Use dilutions suggested by Turco are as follows: Cleaner-germicide and cleaner-sanitizer 2-4 ounces of "Zeal" to one gallon of cold, but preferably hot water. As a cleaner-deodorizer and for damp mopping of floors: two ounces per gallon of hot or cold water.

Fleuroma Names Two

Fleuroma, Inc., New York essential oil and aromatic specialties house, recently announced the appointment of T. Bassiri as a staff perfumer. Dr. Bassiri arrived from France last month to take up his new position. He was previously associated with Descollonges, perfume materials house in Lyons.

At the same time, Fleuroma announced that Thomas F. LaPrelle had joined its metropolitan sales staff, covering New York City and the surrounding Eastern Seaboard area.

T. Bassiri

Thomas F. LaPrelle

Morris Stanley, left, vice-president of Victor Chemical Division of Stauffer Chemical Co., New York, presents check for $2,200 to Dr. J. Edmond Vandegaer, J. T. Baker Chemical Co., Phillipsburg, N. J. Dr. Vandegaer won first prize in national "It Pays to See Victor" essay contest. Presentation was made at special luncheon attended by Elwood Myers, Stauffer advertising director; Rance F. Cotten, Victor's New York sales manager; Charles Loring, national product manager, Stauffer; Dr. Joseph E. Stevens, president of Baker, Ralph A. Clark, vice-president and Dr. Charles Schramm, research director.

Madison Advances Heller

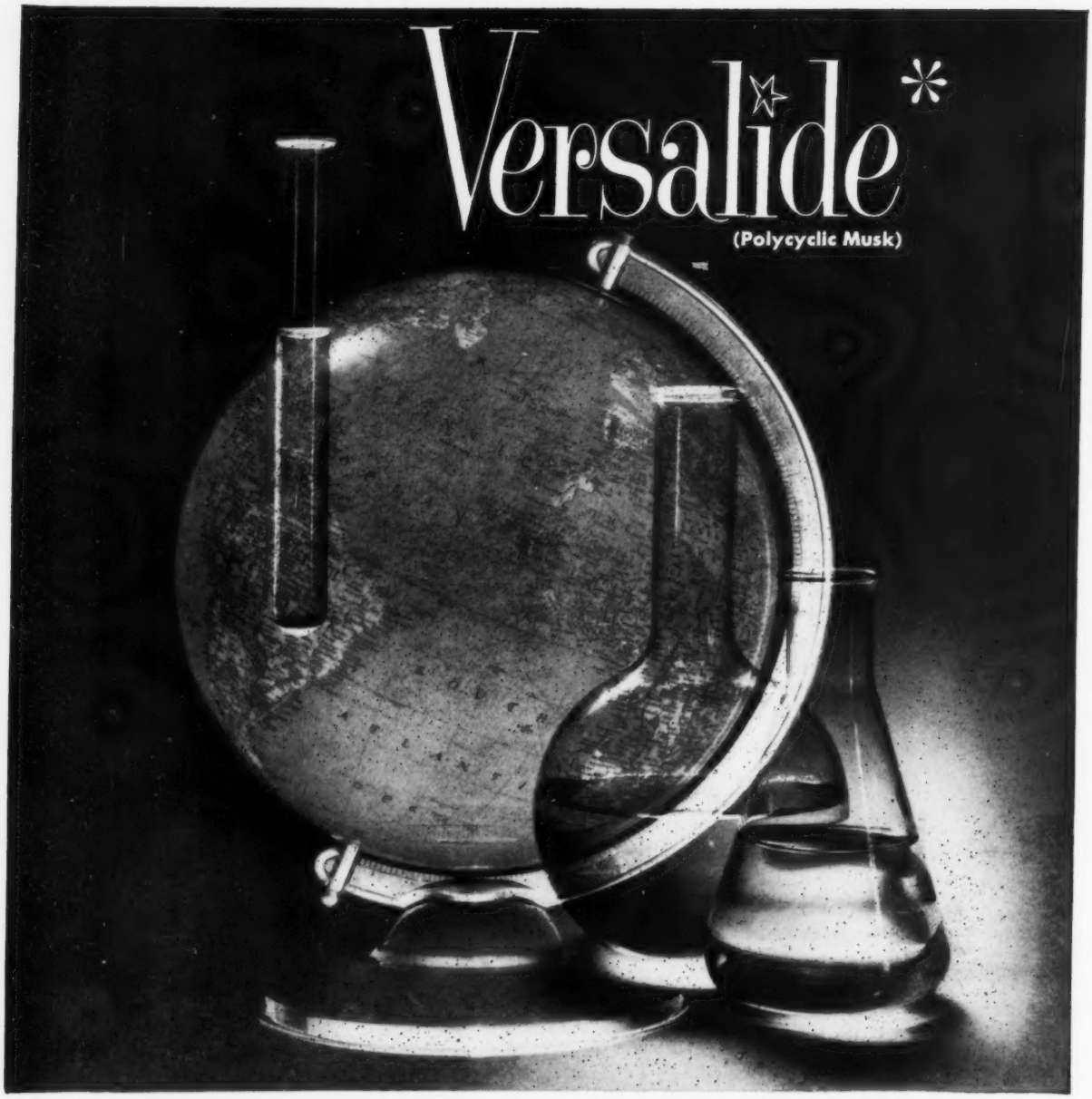
Appointment of Marshall Heller as general sales manager was announced last month by Madison Chemical Corp., Maywood, Ill., chemical specialties firm. With the company since April 1958 he became regional manager in Sept. 1959.

—★—

New Literature from Mona

Two new technical bulletins are available from Mona Industries, Inc., Paterson, N. J., manufacturer of surface active agents and related products. Two types of waterless hand cleaners, gel and liquid, that can be compounded without heat or special equipment, are discussed in bulletin No. 213c.

A "universal" type detergent is described in technical bulletin No. 214d. The material is said to combine advantages of nonionic and anionic type surface active agents. Numerous formulas are given.



an international success!

Within a year of its introduction, *Versalide*, Givaudan's outstanding new polycyclic musk, has met with international acceptance! Perfumers throughout the world of fragrance have recognized in its versatility and unique combination of advantages a whole new field of opportunity for creative perfumery.

Versalide lends to a perfume all the enhancement, sweetness, strength, fixation and blending properties expected only from the macrocyclic musks, and yet at a fraction of their cost.

A pure chemical body, not a mixture, *Versalide* is economical—stable to light, heat, air, alkali; and does not discolor soap. And its versatility is practically unlimited!

We will gladly send you a sample and more detailed information.

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NSSA Elects Newman

Samuel Newman, vice-president of Creco Co., Long Island City, N. Y. sanitary supply firm, was elected national vice-president of the National Sanitary Supply Assn. during the 37th annual convention and trade show at the Hotel Fontainebleau, Miami Beach, Fla., May 22-25. He succeeds Herbert J. L. Baum of Mipro Metal Products Co., South San Francisco, who was elected president. The other new officer of NSSA is Nick G. Contos, T. F. Washburn Co., Chicago, who was elected treasurer to succeed Jeffrey L. Fried of Walton-March Co., Highland Park, Ill.

Newly elected directors, three of whom are from the soap and detergent industry, include: Robert E. Solly, Harley Soap Co., Philadelphia, to represent district 2; John T. Wilson, A. B. C. Compounding Co., Atlanta, to represent district 3; Ralph Haag, Haag Laboratories, Inc., Blue Island, Ill., district 4, and Gordon S. Bodek, Bobrick Dispensers, Inc., Los Angeles, district 8.

Shim D. Lehrman, A. J. Lehrman & Sons, Harrisburg, Pa., a distributor, served as president of NSSA during 1959-60.

Nearly 200 manufacturers of sanitation and maintenance chemicals, supplies and equipment exhibited at the trade show.

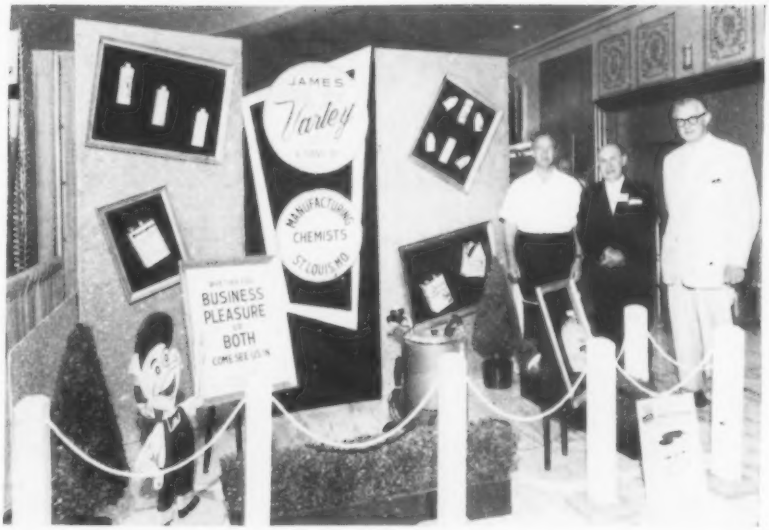
According to Leo J. Kelly, executive vice-president, next year's annual convention and trade show will be held at the Conrad Hilton Hotel, Chicago, Apr. 23-26, 1961. The 1962 meeting will be held in New York City, with the trade show at the Coliseum and the headquarters hotel, the Waldorf-Astoria.

—★—

Boosts Polymer Capacity

Polyvinyl Chemicals, Inc., Peabody, Mass., announced last month completion of new facilities which will step up emulsion polymer capacity by 20 million pounds annually. The new installation will produce styrene, acrylic, and vinyl acetate polymer emulsions and can be adapted to making other polymer materials according to Max Potash, the firm's president.

In addition to expanding production facilities, Polyvinyl has added 5000 square feet to its pilot plant and research laboratory space. The firm's products are used in floor polishes, leather finishes and other coatings.



Unusual booth at National Sanitary Supply Assn. trade show in Miami Beach last month was that of James Varley & Sons, Inc., St. Louis chemical specialties firm. No personnel were stationed at normally fully occupied booth. Instead a sign stated simply and effectively: "Whether for Business or Pleasure or Both, Come See Us at Suite 866 or Cabana 308".

—★—

Colgate Advances Vrindten

Appointment of Joseph G. Vrindten to the research and development department of Household Products Division of Colgate-Palmolive Co., New York was announced last month by Richard B. Wearn, director of the department.

Mr. Vrindten has been assigned to the bar and cleanser evaluations group at the firm's laboratories in Jersey City. With Colgate since January 1959, he has worked as a member of the industrial engineering department staff and also in the Jersey City plant control laboratory.

—★—

Cuts Bleach Price

A price reduction of five cents per pound for "Oxone" monopersulfate bleaching compound was announced last month by E. I. du Pont de Nemours & Co., Wilmington, Del. New truckload price is 30 cents per pound, 14 cents down from the introductory price which prevailed in June 1959 when "Oxone" manufacturing facilities had just been completed in Memphis, Tenn.

"Oxone" is an oxygen-type dry bleach for formulation into home laundry bleaches, household cleansers, and industrial bleaching compounds. It is claimed to be odorless and safe for all modern fabrics.

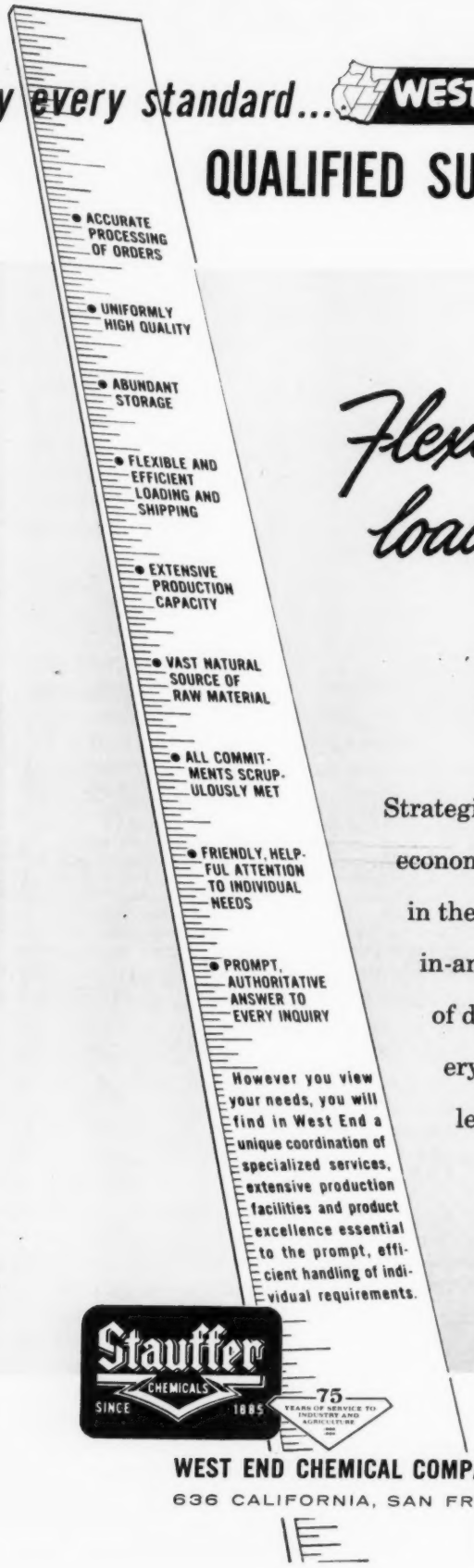
—★—

Armour Chemicals History

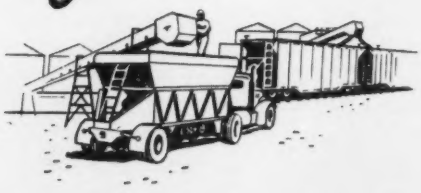
"Development in depth, or from packing house to cationics" might be the title of a booklet just published by Armour Industrial Chemical Co., Division of Armour & Co., Chicago. Actually the 20-page illustrated brochure is entitled: "Progressive Aliphatic Chemistry." It contains a concise history of fat chemicals developments at Armour's McCook plant, which produces fatty acids and fatty acid derivatives.

Current installations and processing operations at McCook are shown in pictures and flow diagrams. Products resulting from these processes are described and their uses indicated.

By every standard... WEST END MEASURES UP AS THE QUALIFIED SUPPLIER OF SODIUM SULFATE


• ACCURATE PROCESSING OF ORDERS
• UNIFORMLY HIGH QUALITY
• ABUNDANT STORAGE
• FLEXIBLE AND EFFICIENT LOADING AND SHIPPING
• EXTENSIVE PRODUCTION CAPACITY
• VAST NATURAL SOURCE OF RAW MATERIAL
• ALL COMMITMENTS SCRUPULOUSLY MET
• FRIENDLY, HELPFUL ATTENTION TO INDIVIDUAL NEEDS
• PROMPT, AUTHORITATIVE ANSWER TO EVERY INQUIRY
However you view your needs, you will find in West End a unique coordination of specialized services, extensive production facilities and product excellence essential to the prompt, efficient handling of individual requirements.

Flexible and efficient loading and shipping



Strategic location of West End plant permits fast, economical transport by rail or truck to any point in the West or throughout the nation. 30 minute in-and-out loading for bulk trucks at any hour of day or night through "serve yourself" delivery. Immediate shipment in West End's own leased hopper cars—ready at all times.

Stauffer CHEMICALS SINCE 1885 — 75 YEARS OF SERVICE TO INDUSTRY AND AGRICULTURE

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FOR SURFACTANTS CALL SURFACT-CO.

for formula constancy
specify
SURFACT-CO. DETERGENTS

SURFACTANTS BY SURFACT-CO improve the efficiency, better the quality of synthetic detergents—assure formula constancy and minimize product and processing costs because Surfact-Co provides the basic materials at lowest cost per pound of active ingredients.

A MOST COMPLETE LINE

CAR SHAMPOOS:
Surfact-Co 60: Affords excellent foam and stability.
Surco 57: Greatest foam, completely neutral and simplest viscosity control.
Surco DDBSA: For those with adequate facilities for carrying out neutralization. Affords greatest economies.

LIQUID DISH DETERGENTS:
Surco 40 • Surco LD119: Completely formulated.
Surco 57, Stabilizer #2. Surco 38•Surco SF42M: Individual ingredients for those wishing to do own compounding.

GLASS RINSE:
Surco SF42M: Anioric type not compatible with quaternaries.
Surco Coconut Condensate: Compatible in formulations using quaternaries.

GENERAL PURPOSE CLEANERS:
Surfact-Co MA: High hard water tolerance. No coupling agent required.
Surco 5024: Standard type requiring coupler such as Surco SF42M or liquid soap.

OVEN, EXHAUST FAN, DEEP FRY CLEANERS:
Surco SF42M: —or—If high inorganic content desired, use Surco HDL.

HIGH PHOSPHATE CLEANERS:
Surco 5024: If good flash foam and low foam stability are required.
Surco HAB: If low flash foam and poor stability are required.
Surco HDL Base: If high flash foam and high foam stability are required.

LOTION TYPE FLOOR CLEANERS:
Surco 5024:
—or
Surfact-Co MA:

CARPET AND UPHOLSTERY CLEANERS:
Surco SLS, Surco TEA: To be formulated.
Surco 129: Completely formulated.

TILE AND MARBLE CLEANER:
Surco HAB: High silicate and alkali tolerance.
Surfact-Co MA: For use in formulations using an abrasive.

WAX STRIPPERS:
Surco HAB: For highly alkaline types.
For solvent types, Surfact-Co MA —and Surco SF42M

WATERLESS HAND CLEANERS:
Surco 5024: For solvert types.
Surco X: Non-solvent types.

HIGH VISCOSITY GERMICIDAL CLEANERS:
Surfact-Co MA: With independent laboratory report on phenol coefficient when formulated as suggested.

WHITEWALL TIRE CLEANER:
Surco SF24M: With solvent type.
Surco HAB: With high alkali type.

POT AND PAN CLEANERS:
Surco 38:
Surco HDL Base:

FOAM STABILIZERS AND THICKENING AGENTS:
Surco Stabilizer #2:
Surco Coconut Condensate:

COMPLETE FORMULATIONS

SURFACT-CO 56 Floor Cleaning Synthetic Concentrate. End use dilution 180-1.

SURFACT-CO 40 Liquid Hand dish detergent. Copious foam, high stability under heavy load.

SURFACT-CO 129 Carpet cleaner and car washer. A synthetic paste detergent with auxiliary emulsifiers and foam stabilizers.

Surfact-Co is a low-cost, quality producer with ample facilities for prompt shipment during your peaks.

TO PROCESSORS, COMPOUNDERS AND DISTRIBUTORS Surfact-Co offers not only a complete surfactant line, but "the most helpful, thorough and professional Technical Service in the field". Without charge, our chemists help you improve your formulations, help you select the *one* detergent material best for your product—and they stay with you till optimum processing and formulation efficiency is achieved. Send the coupon for data, samples and prices. Include a notation—in strictest confidence—on any special product or product-development problem you might have.

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Synthetic Detergent Concentrates
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NAME TITLE

COMPANY

ADDRESS

CITY STATE

John Gillespie Dies

John T. Gillespie, Sr., chairman of the board of Gillespie-Rogers-Pyatt Co., New York shellac importers and processors, died May 21. He joined the firm in 1894 after his graduation from the Sheffield Scientific School at Yale University. Prior to assuming the chairmanship he had served as president of the firm for many years. His son, John T. Gillespie, Jr., is currently president of the company, representing the fourth generation of Gillespie management.

Gillespie - Rogers - Pyatt Co. resulted from a merger in 1929 of L. C. Gillespie and Sons with Rogers-Pyatt-Shellac Co., a wholly owned subsidiary. Gillespie was founded in 1824 by Charles Gillespie, grandfather of John T. Gillespie, Sr.

Mr. Gillespie leaves his wife, Eleanor Samson Gillespie; three sons, John Gillespie, Jr., of Morristown, N. J.; Kenrick Gillespie of New York City; and McDonald Gillespie of Darien, Conn.; and two daughters, Mr. Leland H. Ross of New Vernon, N. J., and Mrs. Edward L. Vogt of Morristown.

—★—

Young Heads Pond's Board

Lloyd V. Young has been named chairman of the board of Chesebrough-Pond's Inc., it was announced last month by Jerome A. Straka, president and chief executive officer. Mr. Young succeeds Arthur B. Richardson, who retired April 30.

Mr. Young was senior vice-president of Chesebrough-Pond's and president of the company's international division until April 30. He had been president of Pond's Extract Co. before the merger of Chesebrough and Pond's in 1955. Mr. Young joined Pond's in 1923, became its president in 1947.

chemicals on the move...

triethanolamine

Immediate shipment of both 80% and 98% triethanolamine can be ordered from the Brandenburg, Kentucky, plant. Tank car, compartmented car, tank truck shipments are nitrogen-blanketed to assure color stability.

In addition to its more familiar use in surfactants, cosmetics, waxes, polishes and metal working oils, triethanolamine is an important ingredient in protective coatings, shampoo formulations, air entraining agents in cement, and in rubber processing.

LCL shipments are provided by local distributors. See your Olin Mathieson representative or write for samples and technical information.

Olin Mathieson

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CHEMICALS

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POLYPROPYLENE GLYCOLS • ETHANOLAMINES • GLYCOL ETHERS • SURFACTANTS • ETHYLENE DICHLORIDE

Advancement of Robert J. Roberts to district manager of fatty acid sales department of Emery Industries, Inc., Cincinnati, was announced recently by G. W. Boyd, fatty acid sales manager. Mr. Roberts is directing sales in the area covered by the New York and Boston offices. This includes New England, eastern New York and New Jersey. Mr. Roberts first joined Emery in 1939. He served for three years as a control and development chemist. After four years in the Marine Corps during World War II, following which he received his chemistry degree from the University of Cincinnati, he returned to the company in 1948 to join its chemical sales staff. He was assigned to the New York office, which has been his headquarters since. When Emery's sales staff was divided into two departments in 1953, Mr. Roberts joined the fatty acid sales department.

New Phosphate Insecticide

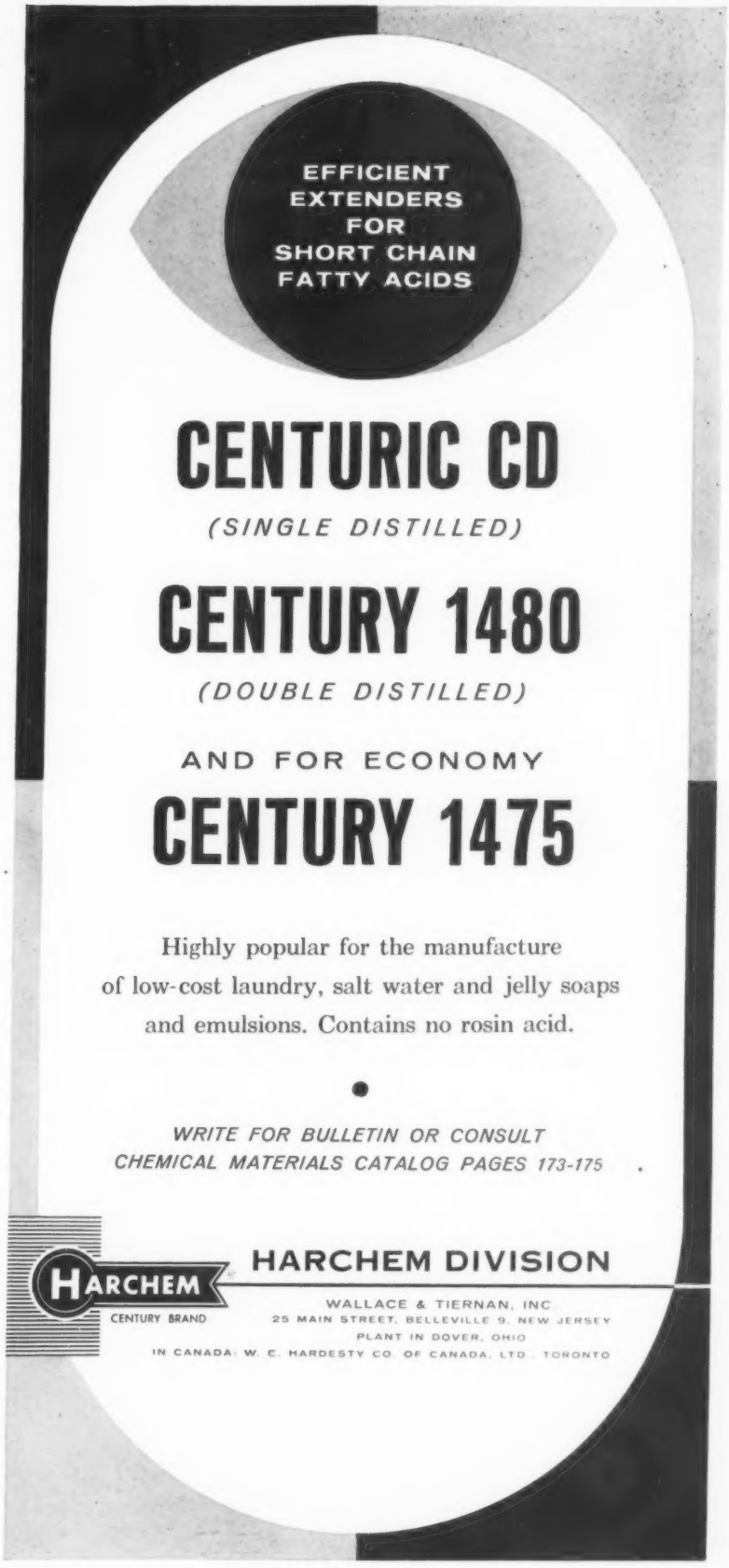
A new organic phosphate insecticide effective against houseflies and roaches with the proposed generic name of butonate has just been announced by Wisconsin Alumni Research Foundation, Madison. Claimed to exhibit "extremely low mammalian toxicity," butonate has recently been granted an experimental permit for extended field tests. Chemical name of the compound is O,O-dimethyl 2,2,2 - trichloro-1-*n*-butyryloxyethyl phosphate. It was developed at the University of Wisconsin by J. E. Casida and B. W. Arthur, who have assigned patents covering their invention to WARF.

Butonate is a colorless liquid, readily soluble in most organic solvents commonly used in insecticide formulations, compatible with pyrethrins and other fast-acting knockdown agents, according to Wisconsin Research. Formulations are said to exhibit no offensive odor due to the presence of the new material.

Suitable for use as a space spray or as a residual insecticide, butonate may be formulated as an emulsion, wettable powder, dust, oil spray or aerosol. Laboratory tests have so far been confined to household pests — houseflies and German roaches. Preliminary tests indicate that the compound may control other species as well in the household and agricultural field.

Like most of the organic phosphate insecticides, butonate is a cholinesterase inhibitor. Mammals and insects degrade the compound differently, which may account for its low mammalian toxicity, it is pointed out by Wisconsin.

Experimental quantities of technical butonate are available to qualified investigators from Wisconsin Alumni Research Foundation, P.O. Box 2217, Madison 5, Wis. Formulations of butonate as well as the technical material can be obtained from Prentiss Drug & Chemical Co., New York.



CSMA Proceedings

The Chemical Specialties Manufacturers Association has just published Proceedings of its 46th Annual Meeting held at the Mayflower Hotel, Washington, D. C. Dec. 7-9, 1959. All association members and registrants at the meeting receive one copy free of charge. Additional copies cost $7.50 each in the United States and Canada, $8.00 in other countries.

The 250-page paper bound volume can be obtained from the CSMA office at 50 East 41st Street, New York 17.

—★—

Hospital Reelects Burch

Russell F. Burch, vice-president of Magnuson Products Corp., Brooklyn, N. Y., manufacturer of cleaning compounds, has been reelected as president of the Swedish Hospital in Brooklyn. This is Mr. Burch's seventh consecutive term in that office.

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Stauffer Appoints Two

Two executive appointments were announced by the agricultural chemicals division of

John H. Kennedy H. L. Straube

Stauffer Chemical Co., New York, last month. John H. Kennedy has been advanced to administrative assistant to the vice-president and general manager of the division. He was formerly eastern sales manager of the division. In this post he is succeeded by Harold L. Straube. Both appointments were announced late in May by Dan J. Keating, vice-president and general manager of the division.

Mr. Kennedy joined Stauffer in 1940 after 20 years in the agricultural chemicals field. In his new position he will coordinate Stauffer's national agricultural chemicals program.

Previously employed in Stauffer's New York office as a sales executive, Mr. Straube is now responsible for all agricultural sales east of the Rockies. He was with John Powell & Co., New York, before joining Stauffer in 1955.

—★—

Penick Moves Division

The Farm Chemical and Insecticide Division of S. B. Penick & Co., New York, will establish new headquarters on July 1 at 4161 Beck Avenue, St. Louis 16, Mo. The move was announced late in May by Frank Seeland, vice-president in charge of the division.

Products sold by the division will be stocked at St. Louis, providing one more shipping point in addition to those used by all divisions in New Jersey, Chicago, and the West Coast. S. B. Penick's main office is located at 100 Church Street, New York 8.

CYANAMID

The diverse properties of Aerosol 22 give it wide use for soaps and detergents. A highly soluble, highly acid- and alkali-stable emulsifier with non-rewetting properties, Aerosol 22 makes an excellent additive for many cosmetics and household and industrial cleaners and polishes. Aerosol 22 has good dispersing qualities and ability to produce small particle-size emulsions – features that impart good spreading or covering properties to such diverse products as beauty creams, floor polishes and shoe polishes.

Potential use of Aerosol 22 as an additive in oven cleaners merits consideration. It has high rinsibility and viscosity lowering properties—it increases penetration and creates no gel structure to inhibit cleaning action. Possibilities of Aerosol 22 in auto cleaners are also interesting—due to non-rewetting properties, ability to remove dirt from hard surfaces and ease of rinsing.

Available in 15- and 50-gal. Liquipaks. For further information, mail coupon today.

OTHER CYANAMID SURFACTANTS OF USE TO THE SOAP AND DETERGENT INDUSTRIES: AEROSOL® OT. One of the most powerful wetting agents and surface-tension depressants available. For use in dry cleaning, wettable scouring powders, and glass cleaning solutions. AEROSOL® OS. A 75% active powder of high alkali stability. For use in scouring powders and heavy industrial cleaners. AEROSOL® 18. A 35% waxy paste for use in heavy industrial cleaners.

AMERICAN CYANAMID COMPANY

PROCESS CHEMICALS DEPARTMENT • 30 Rockefeller Plaza, New York 20, N. Y.

SCSP-6

American Cyanamid Company
Process Chemicals Department
30 Rockefeller Plaza
New York 20, N. Y.

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Clarkson Honors Prutton

Carl F. Prutton, executive vice-president of Food Machinery and Chemical Corp., New York, received an honorary degree of doctor of engineering from Clarkson College of Technology, Potsdam, N. Y., on June 5. At the same time, news was received that Dr. Prutton had just resigned from FMC owing to ill health.

Dr. Prutton served as vice-president of FMC and technical director of its chemical divisions from 1954 to 1956, when he became executive vice-president of the corporation in charge of the five chemical divisions.

—★—

CSC Shifts Sutton

Carroll R. Sutton has been named manager of the Chicago district office of Commercial Solvents Corp., New York, it was announced recently by J. V. O'Leary, general sales manager.

Associated with CSC for the past 26 years, Mr. Sutton has been

Carroll R. Sutton

manager of the Detroit district office since 1937. Under a realignment of sales divisions, Mr. Sutton continues to be in charge of the Detroit office, although he now makes his headquarters in Chicago.

—★—

Advances van Slyke

Lee Van Slyke has been appointed assistant manager of fatty acid sales for Armour Industrial Chemical Co., Chicago, it was announced late last month. Previously, Mr. Van Slyke served as assistant to Paul L. Sheppard, fatty acid sales manager. With Armour since 1933, he has been with the chemical division since 1949.

Continuing its policy of a yearly exchange of ideas and processes between its Brooklyn and Versailles plants, Felton Chemical Co., Brooklyn, announced recently it is sending its technical director, Ira Kapp, to Europe. While abroad, Mr. Kapp is to visit Felton representatives in Belgium, Holland, Germany, Italy and France. There he is to discuss new products and technical developments made at the Brooklyn laboratories.

POLYVINYL CHEMICALS *Specialists In Emulsion Polymers*

WANT TO ADD A HIGH-PROFIT PRODUCT?

Neo Vac V21C PLASTIC STARCH

Formulated with every quality feature to give you a competitive marketing edge, NeoVac V21C is ready to package with minimum handling . . . ready to resell at high profit.

NeoVac V21C requires just dilution and the addition of perfume before packaging. A synthetic plastic resin emulsion, NeoVac V21C has been formulated to provide all the most wanted plastic starch features. Non-yellowing, it retains stiffness from 8 to 10 wash cycles and irons easily and smoothly. Negligible settling, even at bottling strength, NeoVac V21C has exceptionally good shelf life. If you've been thinking of adding a plastic starch to your household product line, complete information, technical service and samples are available upon request.

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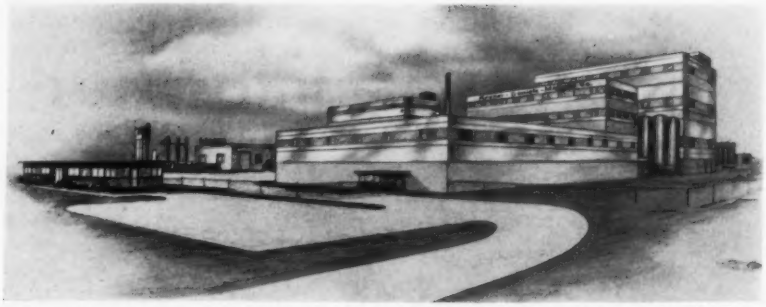
New ADM Chemical Plant

Archer-Daniels-Midland Co., Minneapolis, will build a multi-million dollar chemical center near Peoria, Ill., it was announced last month by John H. Daniels, president. A 200 acre site six miles south of Peoria has been purchased from the Toledo, Peoria & Western Railroad.

Ground will be broken in late summer or early fall of this year with plant operations scheduled to begin in the spring of 1962. The center is expected to employ about 200 workers in the manufacture of nitrogen chemicals, plasticizers, esters, olefins and other chemicals, established and still being developed. Most advanced processes for hydrogenation, molecular distillation, continuous splitting, epoxidation and ammonolysis will be installed in the new plant, Mr. Daniels said. Peoria was chosen as a site because it is strategically located for sources of ADM's raw materials, including soybeans, tallow and petrochemicals. It is favorably placed also in relation to ADM's chemical customers and has ample rail, highway and river transportation.



Architect's drawing of multi-million dollar A-D-M chemical center to be built at Peoria, Ill.

ADM currently operates chemical plants in Minneapolis; Los Angeles; Newark and Elizabeth, N. J.; Pensacola, Fla.; Valley Park, Mo.; Ashtabula, O.; Wyandotte, Mich.; and Decatur, Ill.

—★—

Allied Advances Begley

Donald B. Begley has been assigned to executive sales—isocyanates for National Aniline Division, Allied Chemical Corp., New York. Mr. Begley's advancement was announced late in May by Charles P. Berdell, director of sales for National Aniline.

With National Aniline's chemical sales department since Oct. 1959, Mr. Begley will now be responsible for metropolitan area sales in New York and Chicago. Prior to joining National Aniline he was associated with Reilly Tar & Chemical Co., Indianapolis, working out of Tuckahoe, N. Y. He holds a B.S. degree in business administration from the University of Notre Dame.

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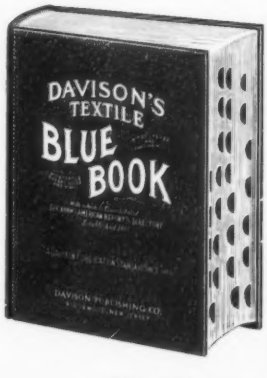
Revised 95th Year Latest Davison's Textile Blue Book*

(*Reg. U. S. Pat. Off.)

The large book in the office for circularizing, mailing, telephoning or reference, the small one for your salesmen or traveling executives, will pay their low cost in a few days!



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MIRANOL C2M CONC.

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Detergent capable of holding alkalies and electrolytes in emulsions such as cleaning waxes. Does not readily re-dissolve.

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(Capric Derivative)

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New Monsanto Surfactants

Four new alkyl phenol type nonionics have been added to the "Sterox" line of surface active agents by Monsanto Chemical Co., St. Louis, Mo. "Sterox DF," "DJ," "NJ," "NL" are said to combine low odor, light color, stability in acidic and alkaline media with good detergency. They are suitable for liquid detergent formulations, with "NL" especially designed for this purpose. Powdered detergents, insecticides, metal cleaners and various industrial wet processing operations are among applications for these surfactants.

—★—

Wakeman Rejoins Onyx

Reginald L. Wakeman has been named vice-president and director of research and development for Onyx Chemical Corp., it was announced last month. Dr. Wakeman's previous associations include National Aniline & Chemical Co., and the Mellon Institute in Pittsburgh.

Reginald L. Wakeman

He joined Onyx as director of research in 1945. In 1951 he left to become technical director for Quaker Chemical Co., Conshohocken, Pa. Most recently he was associated with Packaging Corp. of America, Grand Rapids, Mich.

—★—

FMC Appoints Kroeger

Albert F. Kroeger, Jr., has been appointed district sales manager in the San Francisco area for the mineral products division of Food Machinery and Chemical Corp., New York, it was announced in May by R. C. Tower, sales manager of the division.

Mr. Kroeger joined FMC in 1956 as a sales representative in the western territory. In his new post he makes his headquarters in the division's Newark, Calif., plant. The division makes phosphates, magnesias and barium chemicals.

—★—

Firmenich Appoints Myers

The appointment of C. Richard Myers as branch manager of the Chicago sales office of Firmenich Inc., New York, was announced last month by Charles C. Bryan, president. Before he joined Firmenich as assistant branch manager of the Chicago office about four years ago, Mr. Myers was technical sales representative for Sterwin Chemicals, Inc., New York.

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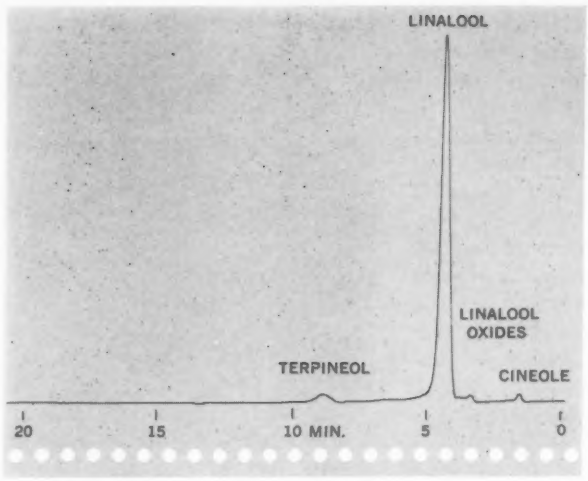
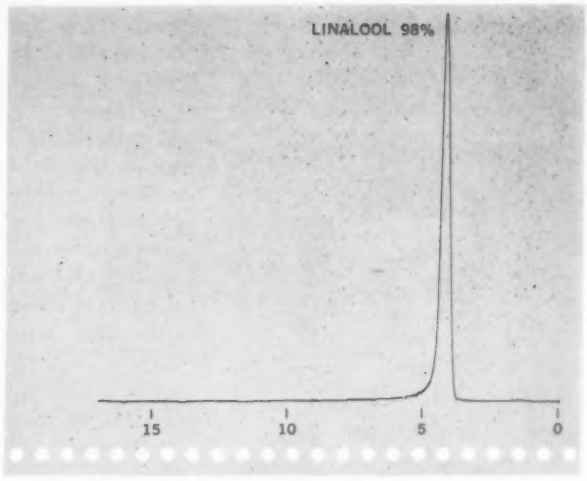


VAPOR PHASE CHROMATOGRAPH: LINALOOL EX-BOIS DE ROSE OIL



VAPOR PHASE CHROMATOGRAPH: LINALOOL GLIDDEN, 98% PURE

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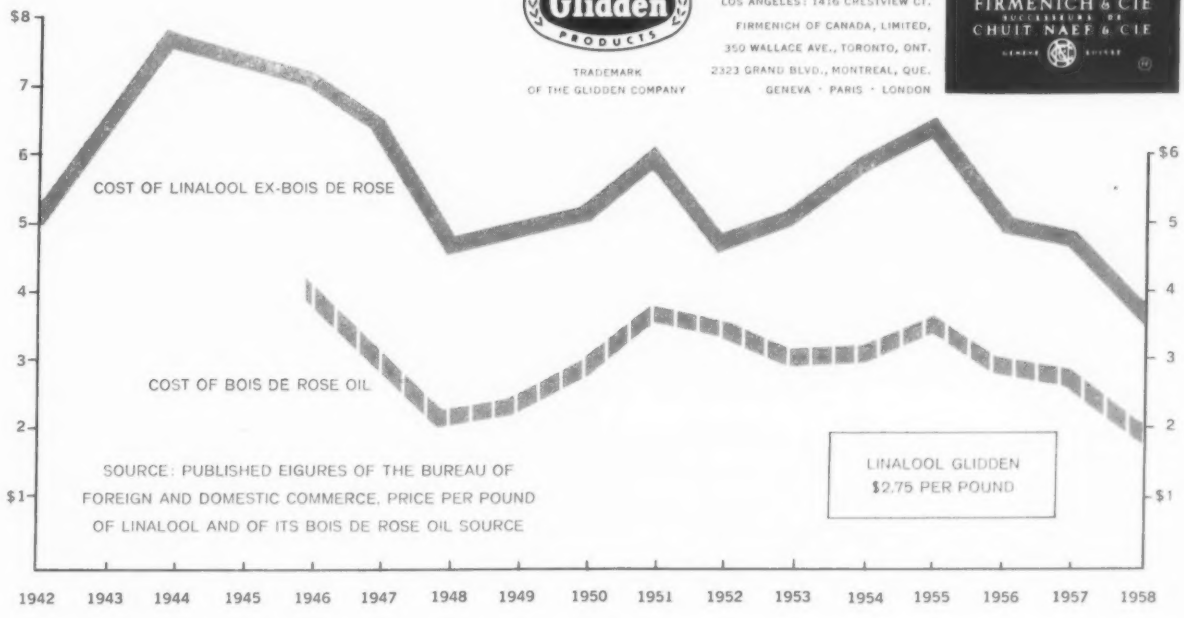

Lenahan in Hooker Post

John J. Lenahan II has been named a product supervisor-inorganic chemicals in the sales department of the Eastern Chemical Division, Hooker Chemical Corp., Niagara Falls, N. Y. He reports to James E. Ferris, product manager-inorganic chemicals. With the company since 1948 when he started as a research chemist in the Durez Plastics Division, Mr. Lenahan served most recently as administrative assistant to R. Wolcott Hooker, a senior vice-president.

John J. Lenahan, II

—★—

'Gentle Fels' Commercial

"Gentle Fels" liquid dishwashing detergent of Fels & Co., Philadelphia, is currently being promoted by a singing commercial delivered by Rosemary Clooney on the Crosby-Clooney Show over the CBS radio network. "Instant Fels Naptha" and "Fels Naptha Cleaner" will also be advertised in commercials to be presented by Miss Clooney and Mr. Crosby.

—★—

New D&O Price List

A new price list and catalog has just become available from Dodge & Olcott, Inc., 180 Varick Street, New York 14. The 36 page semi-annual publication covers essential oils, aromatic chemicals and specialties, and certified colors. In addition to price information the booklet gives short descriptions and use data for many of the firm's materials and specialties.

Hallock to Va. Smelting

Charles S. Hallock has been named district sales representative in the northeastern United States for the aerosol sales department of Virginia Smelting Co., West Norfolk, Va., it was announced in May by A. K. Scribner, Jr., department manager. Prior to joining Virginia Smelting Mr. Hallock was engaged in sales for Continental Can Co. and, most recently, for Amchem Products, Inc.

Charles S. Hallock

Virginia Smelting Co. markets its line of industrial aerosols under the trade names "Lethalaire" and "Petasol."

—★—

Colgate Advances Lawless

Appointment of Paul A. Lawless as manager of merchandizing for the household products division of Colgate-Palmolive Co., New York, was announced recently by Robert W. Young, Jr., vice-president and director of marketing for the division. Previously sales administration manager of household products, Mr. Lawless now reports directly to Ralph F. Linder, general products manager.

Having joined Colgate in 1949 as a salesman in the Philadelphia district, Mr. Lawless became a supervisor in the Baltimore district in 1954. A few months later he was transferred to the home office where he was appointed assistant to the manager of soap sales. In 1957 he was named manager of sales service for the household products division.

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Outstanding caustic rust removal compounds are possible with Pfizer Gluconates. Besides dissolving rust efficiently, the presence of gluconates will retard after-rust and prolong the life of the bath. Also, a small amount of gluconate added to standard alkaline cleaning compounds helps in the removal of light rust films.

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Pfizer Gluconates in aluminum etching compounds prevent the formation of hard, adherent scale. Efficient and economical, too, because you use very little gluconate in the compounds, yet assure an even, uniform etch.

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Pfizer Gluconates improve the efficiency of caustic paint-stripping compounds. They increase the rate of paint film removal and permit free rinsing of the paint-stripped metal. In addition, Pfizer Gluconates eliminate the usual after-film of iron oxide.

Pfizer Gluconates have a proven record of stability in caustic compounds, both in storage and in use. Be sure your caustic formulation line is complete. Write to Pfizer for technical data and use-level information on sodium gluconate and gluconic acid.

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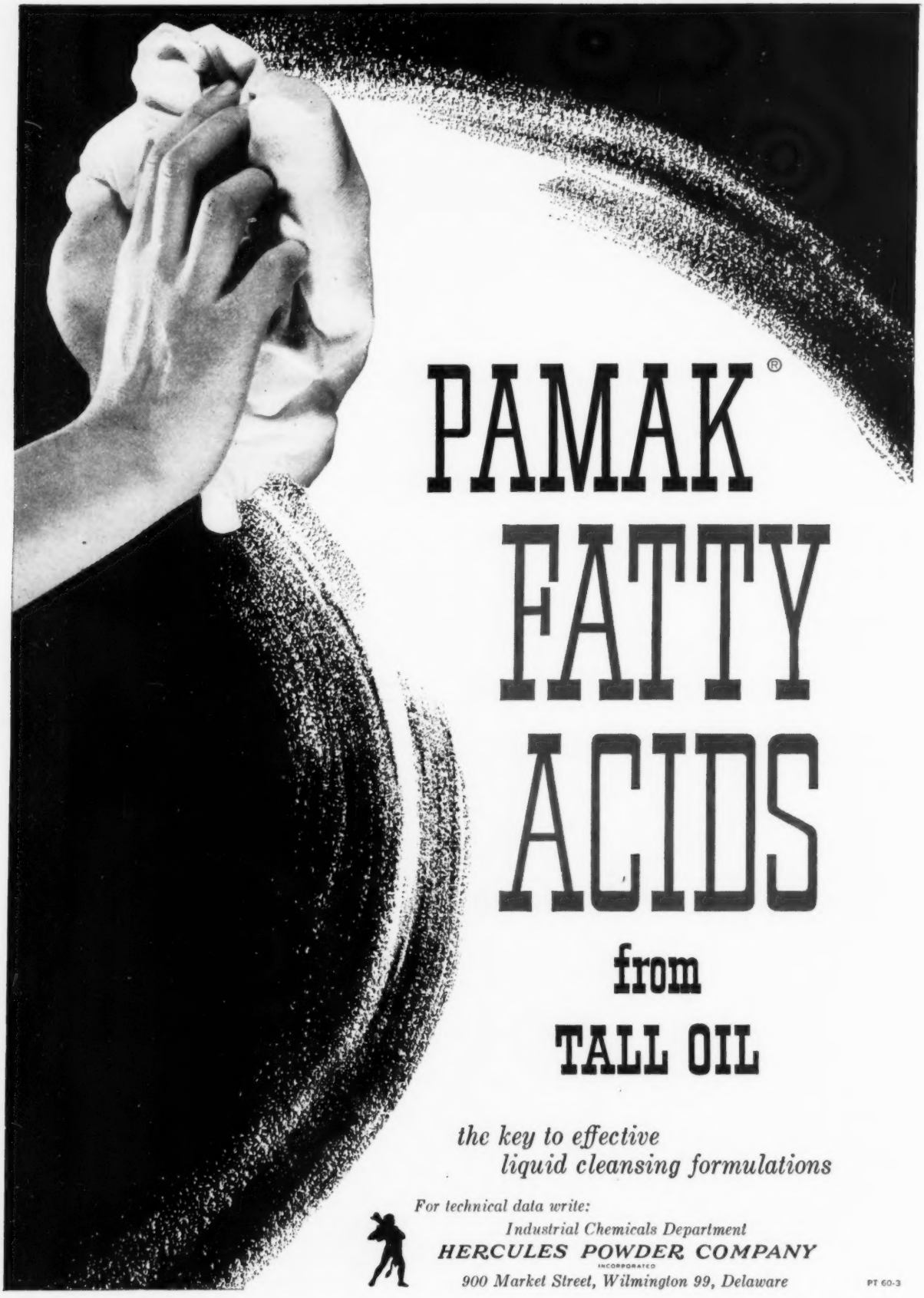

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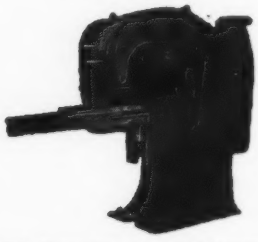

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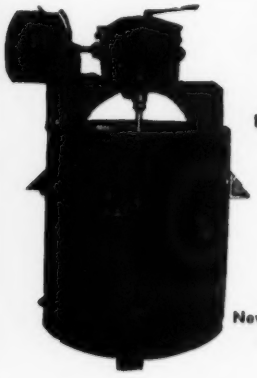

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Chief Chemist: Fastest growing sanitation & maintenance chemical manufacturer in Florida needs top man with background in waxes, cleaners, degreasers, insecticides, detergents, etc. Send details and salary requirements in confidence. Outstanding opportunity. Address Box 467, c/o *Soap*.

Representative Wanted: Sales representative for middle Atlantic states to call on pest control operators and formulators for established East Coast house. Replies treated confidentially. Address Box 456, c/o *Soap*.

Chemical Salesman Wanted: We have opening for a hardworking, experienced salesman to call on distributors of chemical specialties and aerosols in the Southeastern states. Earnings far above average, established trade, good drawing account including expenses plus commission. Must be willing to remain away from home two weeks per month. All replies will be answered and kept confidential. We are the leading manufacturer in our field. Address Box 443, c/o *Soap*.

Salesman Wanted: By well known manufacturer of highly specialized surface active agents. Some chemical background and experience essential. Applicant must be free to travel nationally. State qualifications and salary expected. Enclose snapshot. Address Box 444, c/o *Soap*.

Wanted Mfrs. Agents: To sell our low cost amines, glycols, solvents, polyethylene waxes and glycol ethers, to manufacturers of polishes, detergents, industrial cleaners, soluble oils, buffing compounds, emulsifiers, soaps and textile chemicals. Our products are laboratory controlled, uniform and continually available. Hot leads and active accounts turned over to sales producers. Aggressive representation especially needed in Eastern and Southern territories. All replies held in confidence. Address Box 445, c/o *Soap*.

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in the EFTA . . .

Well-known aerosol packer in Switzerland desires contact with U. S. firm considering contract filling of their products, for sale in the EFTA countries. Please write to

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254 W. 31st St., New York 1, N. Y.

DISTRICT SALES MANAGER

Substantial manufacturer of sanitary maintenance products has lucrative offer for a top quality salesman or sales manager in Indiana, Ohio, Michigan and Illinois. Products are backed by a quarter of a century of experience in the market and are distributed by top line jobbers and direct to industrial accounts. Must be experienced in this field. Travel is necessary to develop and train men. Send complete resume and picture.

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Experienced chemist wanted by a 30 year old mid-western company, must have complete background and knowledge of disinfectants, solvents, floor waxes and detergents for the institutional and industrial field. Submit full resume. Liberal salary, plus profit sharing arrangements. Give full information in first letter. Replies confidental.

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GENERAL SALES MANAGER

Hard hitting, aggressive, capable of hiring 25 to 50 salesman and training same in field. Must have full sanitary maintenance background. Minimum of 5 years. Tremendous opportunity with established 30 year old company who wishes to expand their sales organization. Must relocate. Liberal salary, plus profit sharing arrangements, fringe benefits. Give full information in first letter.

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Situations Wanted

Development Engineer: Would like to associate with aggressive manufacturer of syndets, specialties, asphalts or other chemicals. Eleven years successful supervisory experience in product and process development, research, evaluation, design, operation, start-ups, trouble-shooting. Presently employed by major producer of detergent intermediates and finished detergents. Address Box 469, c/o *Soap*.

Soapmaker Available: Over 20 years experience in kettle room operation, boiling laundry and toilet soaps. Address Box 468, c/o *Soap*.

Organic Chemist: Dr. in organic chemistry, specialized in soaps, vegetable oils, fats, fatty acids, and derivatives. 12 years experience,—research, product development and formulation. Desires responsible position. Address Box 470, c/o *Soap*.

Chemist: Executive, expert in formulations and manufacture of sanitary maintenance chemicals. Experienced in handling men in factory and on large maintenance jobs. Address Box 448, c/o *Soap*.

Manager Soap Production: Over 20 years experience in production of toilet, laundry, coconut and glycerine soaps. Very well versed in manufacturing of detergents and all related fields. Good organizer. German background. Fluent in German, Spanish. Working in Latin-America and seeking employment in the USA. Address Box 450, c/o *Soap*.

Production Specialist: 33 years old, married, background in aerosol and refrigerant packaging and basic chemical production. Desires opportunity in aerosol production. Address Box 451, c/o *Soap*.

Now Available: Third edition HANDBOOK OF PEST CONTROL by Mallis. Price $12.50. Outside U. S. add 50¢ for postage. See page 70.

Business Buy/Sell

Soap Plant Wanted: To buy or rent soap plant located in mid or south west for boiled soaps, bar, chips etc. Reply with full particulars, in strict confidence. Address Box 472, c/o *Soap*.

Wanted—Close Outs: Aerosol products and chemical specialties. E. L. Berger, 71 Stanton St., New York 22, N. Y.

Wanted: 2500 gallon capacity stainless steel tank, round with open top. Suitable for agitation. Address Box 471, c/o *Soap*.

For Sale

For Sale: By I. E. Newman, 818 W. Superior, Chicago, Ill., CH-3-1425. Mixers. Marion-Munson, sizes 50# to 10,000# Crutchers—1,000-8,000#; Wrapper Type S; Auto Cutting Table; Bucket Elevators, Mills, Cutters, Crushers, Soap Equipment. Prices on request.

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For Sale

For Sale: MRM, 6 spout, vacuum liquid filler; Whirlwind portable screw capper; Gluemaster, semi-automatic label gluer; Day 450 gallon ribbon blender. Sell us your surplus equipment. Irving Barcan Co., 249-51 Orient Ave., Jersey City 5, N. J.

For Sale: Bowen pilot T-304 SS spray dryers, Sharples #16V inconel soap centrifugals, Hope single piston stainless filler. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

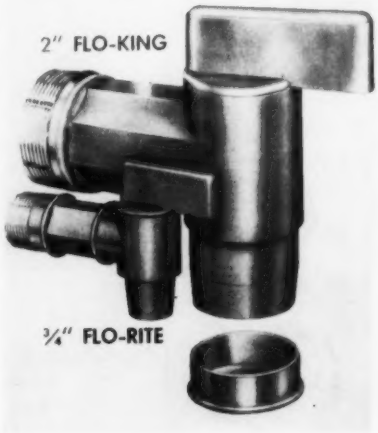
For Sale: 3 and 4 roll granite steel roller mills. Plodders. Grinders. Chippers. Crutchers. Slabbers. Cutting tables. Kettles. Filter presses. Mixers. Sifters. Foot and power soap presses. Partial listing. We buy surplus equipment. Stein Equipment Co., 107 — 8th St., Bklyn. 15, N. Y.

For Sale: 78 page listing of "Surfactants" (1958) Price $2.50. Write John W. McCutcheon, 475 Fifth Ave., New York 17.

Jumbo Plastic Faucet

A new two inch polyethylene drum faucet was introduced recently by Multi-Meter Corp., 1635 Coining Drive, Toledo, O. The firm is marketing the device under the trade name "Flo-King."

Said to empty a 55 gallon drum of "average" liquid in a little over two minutes at full flow, the



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device handles viscous materials, features vertical ribs inside the spout to eliminate dribble. Instant flow is obtained by half turn of handle. Faucet does not stress-crack or break and is inert to most chemicals stored in drums, Multi-Meter claims.

Overall length of "Flo-King" is six inches in closed position; weight nine ounces per faucet. It fits all standard two inch steel shipping container openings, is said to resist five times the pressure exerted in a full 55-gallon drum. Residual drippage is eliminated by a polyethylene spout closure.

European Aerosols

(*From Page* 144)

in three different languages, (German, French, English) and in the hands of the audience during the presentation by the speaker. It has been our experience that data, information, etc., given prior to or during a paper tends to reduce the attention given the speaker, however, I was impressed by the courtesy provided the speaker in all cases and despite the above, all attended the entire session.

The various committees of their Associations are well under way, with specific projects. Technical Committees, the Publicity Committees, the Survey Committees, etc., all look to the C.S.M.A. with great interest and as a source of reliable information for procedure, data, trends, etc. It is my opinion that duplication of effort could be minimized if the bulletins sent out by the C.S.M.A. to Europe were more widely distributed and studied, as many of their projects have a common basis.

In summary, the progress made in Aerosol Association activity in Europe has been very satisfactory—progress, which I believe justifies consideration on the part of the C.S.M.A. of an Aerosol European Committee to work for a closer cooperative program.■

Portion of audience during presentation of papers at the second International Congress of the Federation of European Aerosol Associations, meeting at the Hotel Park, Dusseldorf, April 27-28. In lower photo, at directors' table during meeting are shown, l. to r.: G. Mayer, president of International Aerosol Assn.; W. Staehle, president of Interessen-Gemeinschaft Aerosol, secretary for the meeting; Frederick G. Lodes, Lodes Aerosol Consultants, Inc., New York, and official representative of the Chemical Specialties Manufacturers Assn., of which he is treasurer;; Y. Talvitie, president of Finnischen Aerosol-Vereins; Claude Frank, president of Comité Francais des Aerosols; F. Harlan, president of the Federation of European Aerosol Associations.

Can. Ag. Chem. Assn. Meet.

The eighth annual meeting and conference of the Canadian Agricultural Chemicals Association will be held at the Britannia Hotel, Lake of Bays, Muskoka, Ont., Sept. 12th and 14th.

The program will include the following contributions: "Evaluating New Pesticides," by F. Glen, director general, research branch, Canada Department of Agriculture; "Insect Resistance," by A. W. A. Brown, Department of Entomology, Western University, London, Ont.; "Tariff Reference 120," by J. A. Davis, chairman, Chemical Industry Tariff Committee; "Selling and Advertising," by Louis F. Czufin, California Spray Chemical Corp.

Further details on the program will be available shortly, according to Michel Chevalier, general manager of the association.

Washing Powders

(*From Page* 154)

B	
Soda ash, light	40
TSPP, anhydrous	10
AB-sulfonic acid	10
Sodium hypochlorite solution	2
CMC, powdered	2
Sodium metasilicate, anhydrous or pentahydrate	6

Premix ingredients in A; then mix A with mixture B.

Concerning solvent / detergent combinations one word of caution seems in order. Although these products have been tested, they have not yet passed all types of performance tests. However, the author believes that the presence of solvents increases the oily soil emulsifying powder of AB-sulfonic acid and serves to control excessive foaming of such detergents.

References

(1) Israeli Patent 12,536
(2) German Patent 396,155, A. Welter
(3) A. Davidsohn, Jahrbuch fur den Praktiker, 1960, H. Ziolkowsky, K. G., Augsburg, Germany
(4) A. Davidsohn, *Soap and Sanitary Chemicals*, Aug. 1950
(5) A. Davidsohn, *Soap, Perfumery & Cosmetics*, 25, 724 (1952)

Poletis Joins Geigy

G. Poletis recently joined Geigy Agricultural Chemicals Division of Geigy Chemical Corp.,

G. Poletis

Ardsley, N.Y., as sales representative in eastern Washington, northern Idaho, and western Montana. Formerly with California Spray-Chemical Corp., Richmond, Calif., where he covered the western Colorado territory, Mr. Poletis has done graduate work in microbiology and entomology. He also worked for the U. S. D. A.

Perfuming Process

(*From Page* 132)

Oak moss, mousse de chene, benzoin, olibanum, balsam tolu, and balsam peru are among essential oils successfully handled by the new process, according to Dan Rubenfield, Sun-Lac president. Crystalline synthetics, such as musk xylol, musk ketone, coumarin, and others, are claimed to have been formulated satisfactorily.

A perfume containing various oils reportedly incompatible with fluorinated hydrocarbons was fomulated and designated "Bouquet S-119." The fragrance was then compounded into an aerosol using 1.5 parts of concentrate, 13.5 parts alcohol 39C, and 15 parts propellant 114. Loaded in conventional manner the product showed noticeable precipitate after 48 hours, solubilized by the new process it was found clear after six months, according to Sun-Lac. "Bouquet S-119" contained the following ingredients:

parts	
21.25	Oil bergamot natural
7.50	Oil petitgrain S. A.
7.50	Vetivert acetate
6.25	*Musk ambrette
6.25	Iso eugenol
5.00	Amyl cinnamic aldehyde
5.00	*Coumarin
5.00	Benzyl acetate
5.00	Nerol
5.00	Aldehyde C-12 MNA-10% in di-ethyl phthalate
3.75	Oil ylang bourbon
3.75	**Resinodor opoponax
5.00	**Jasmin absolute
3.00	**Jasmin absolute
3.00	Oil patchouli
2.50	**Oakmoss resinex
2.50	**Resinodor balsam peru
1.25	Oil lavender 40-42%
1.25	*Vanillin C.P. USP
1.25	**Resinodor styrax
1.25	Styrallyl acetate
0.75	Oil tarragon

*Dissolved solids—high % will precipitate.

**Materials have been mentioned in articles as incompatible.

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Witco Advances Barker

The advancement of Graham Barker to assistant product sales manager for the "Emcol" line of Witco Chemical Co., New York, was announced last month by Jerome S. Harrison, vice-president and director of marketing of the organic chemicals division. In his new post, Mr. Barker assists Arthur O. Raven, "Emcol" product sales manager. Before his advancement, Mr. Barker was in the eastern regional sales department. He has had experience in the field of surface active agents, particularly with "Emcol" emulsifiers for industrial and institutional cleaning compounds, dry cleaning charge soaps, agricultural pesticide concentrates.

Premiums

(*From Page* 60)

can have a great deal to do with developments in the soap premium field.

I am sure that all these words about the tremendous volume of premiums acquired by foreign populations have led some readers to think tentatively of going into the overseas premium business. For the benefit of those of you who may be thinking this way, let me offer in closing some specific advice on premiums to avoid, taken at random from the files we have accumulated on this subject:

Three dimensional figures of human beings or animals should not be used in the Middle East. Moslems will not accept them.

Articles which are green in color do not sell well in West Africa.

Measuring tapes and/or rulers are not permitted to enter Thailand. The manufacture and sales of such measuring devices is a government monopoly.

White articles are not popular in the Middle East.

Political difficulties sometimes arise in different countries with regard to knives as premiums.■

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COMING MEETINGS

American Oil Chemists Society, fall meeting, New Yorker Hotel, New York, Oct. 17-18.

Association of American Soap & Glycerine Producers, 34th annual convention, Waldorf-Astoria Hotel, New York, Jan. 25, 26 and 27, 1961.

Canadian Agricultural Chemicals Association, Britannia Hotel, Lake of Bays, Muskoka, Ont., Sept. 12-14.

Canadian Manufacturers of Chemical Specialties Association, 3rd annual convention, Queen Elizabeth Hotel, Montreal, Oct. 24-26.

Chemical Specialties Manufacturers Association, 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla., Dec. 3-9.

Chemical Specialties Manufacturers Association, first annual mid-western golf outing, Medinah Country Club, Medinah, Ill., Sept. 20.

Drug, Chemical & Allied Trades Association, 70th annual meeting, Sagamore Hotel, Bolton Landing, N. Y., Sept. 15-18, 1960.

Industrial & Building Sanitation-Maintenance Show and Conference, Sheraton-Cadillac Hotel, Detroit, Oct. 24-27.

International Congress of Surface Activity, Cologne, Germany, Sept. 12-17.

National Agricultural Chemicals Association, annual meeting, Del Coronado Hotel, Coronado, Calif., Sept. 27-29.

National Pest Control Association, annual meeting, Hotel Mayo, Tulsa, Okla., Oct. 17-20.

National Sanitary Supply Assn., 38th annual convention, Conrad Hilton Hotel, Chicago, April 23-26, 1961.

Packaging Institute, 22nd seminar, Statler Hilton Hotel, New York, Oct. 31, Nov. 1, 2.

Packaging Machinery Manufacturers Institute, (PMMI) fourth annual show, Cobo Hall, Detroit, Nov. 7-10, 1961.

Society of Cosmetic Chemists, Chicago Chapter, Oct. 11, Nov. 8.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt Hotel, New York, Sept. 13, Oct. 11, Nov. 10; annual meeting and annual dinner, Dec. 8.

Toilet Goods Association, 25th annual meeting, Poland Springs House, Poland Springs, Me., June 27-29, 1960. Scientific Section, Waldorf-Astoria Hotel, New York, Nov. 30, 1960.

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tale ends

WADE Morrow, fisherman of note and prez of the Canada Rex Spray Co., Ltd., of Brighton, Ontario, Canada, recently sent us a clipping from the Apr. 21 Toronto Globe & Mail, a column by Bruce West, in which this versatile writer tells about all the new things packaged in "pushbutton spray cans." He tells about bug killers, polishes, hair spray and the future of aerosol foods. And he mentions inadvertently squirting oneself in the eye with a polish or paint and says there should be a red arrow on the valve to show the user which way to point it. He says we're living in a pushbutton age and if you can't do it with a pushbutton, you're behind the times.

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Fleuroma, Inc., New York perfuming materials manufacturers, recently purchased a large building in Long Island City to house the rapidly expanding business of the firm. The building happens to be located on Dreyer Ave. Now it so happens that P. R. Dreyer, Inc., is one of Fleuroma's important competitors. Anyway, Fleuroma petitioned Queens Borough President Clancy, who is strong for attracting new industry to his borough, to change the name of Dreyer Ave. to Fleuroma Ave. And they offered "Fragrance Ave." as a second choice. So it looks like the name will be changed by the New York City Council.

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The world of bedbugs and bedbugs from all over the world! That's the life of well-known entomologist, Dr. Robert L. Usinger of the University of California. He's been bitten by bedbugs from American flop houses, from English cousins of the same, from bats which live in the Egyptian pyramids and many other places around the world. Dr. Usinger is his own best guinea pig having been bitten over 40,000 times. In his travels around the globe, he is always accompanied by his colonies of bedbugs and lives in constant fear that they may get a stray whiff of DDT. Mostly, bedbugs prefer Dr. Usinger's blood to that of rabbits, chickens or pigeons. It's nice to know.

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Those who plan business trips far ahead will be interested in knowing that the Board of Governors of the Chemical Specialties Manufacturers Assn. will hold its March, 1961, meeting at the Peabody Hotel, Memphis. The dates are March 8 and 9. The next meeting of the CSMA Board will be at the Dupont Hotel in Wilmington, Del. early in October, 1960. This is in line with association policy of moving board meetings around among important cities throughout the country.

Stating that soap and water for cleaning the body are overrated, one Frank Sieverman, Jr. of Ocean Beach, New York writing to the N. Y. Herald Tribune pointed out that the ancient Greeks used oil in place of soap, the Germans used goose grease, the Celts mutton tallow. He goes on to say that "the cleanliness next to godliness is of the spirit, and has nothing to do with the stains on grandpa's pants." Maybe so. But then, the ancient Greeks didn't have to ride in the crowded New York subways on a sultry Friday evening.

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A novel and unusual way to illustrate an address on perfumes and perfuming! Simply spray the audience with the odor under discussion. At the sixth annual symposium of the American Society of Perfumers held recently at the Essex House in New York, Walter Lengsfelder, well-known perfumer associated with Fleuroma, Inc., spoke on "The Abstract Concept in Perfumery." This involved new and little known aromatics. He illustrated his talk by exhibiting a new aromatic. Twelve of his men scattered about the audience sprayed the new odor from aerosol containers. A very effective demonstration.

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Last year, the giant figurehead lion which once graced the Swedish man-of war, "Vasa" some 330 years ago was raised from the bottom of Stockholm harbor. To restore and preserve the three-ton wooden lion, it was first scrubbed with detergent, then immersed in a specially built tub containing 3,500 litres of 20% ethylene polyglycol solution to seal up the pores in the wood, plus some sodium pentachlor phenolate to prevent attacks by microorganisms. The lion will remain in this bath of glycol and pentachlorphenol for several months and then will be ready to show his face to the public.

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Dishwashing detergent for shampooing hair! The Soap Assn. "Digest" reports that Hollywood star, Sonya Wilde, said that she "never had compliments on my hair until I used a detergent that we use for dishes." To remove make-up from her hairline she had to shampoo every day and the actress reported that "My hair has never been in better condition." Now that's really one for the book. Probably one of the newer liquid detergents. But we wonder how come Sonya got the idea to try it in the first place.

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Charley Stephens, whose specialty is the sale of non-food containers for American Can, is apparently a lexicographer who takes his words seriously. In this column a couple of months ago, in an item about "Slikote," a product of Speco, Inc., Cleveland, we inadvertently spelled "snow plows" as "ploughs." That was too much for Senor Stephens and he promptly accused us of going back to the old English spelling from the days of Chaucer. Our defense, "mental aberration." His comment, "maybe you should take a refresher course in spelling."

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In Rhode Island, toothpaste flavored to taste like bourbon, scotch or rye whiskeys has been officially approved for sale by the state's Liquor Control Administration. But when Little Petunia gets hold of her daddy's tooth paste and shows up in school with a breath fit for the local lush, what will teacher think?

"A Captain of Industry" is the title suggested by Clarence Weirich of C. B. Dolge Co., Westport, Conn., for this photograph he took of Mike Lemmermeyer of Aromatic Products, Inc., New York. Photo is made from a black and white print of a color shot taken on the train as both men were returning from CSMA board meeting in Florida earlier this year.